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# GLEANINGS IN BEE CULTURE

SEPTEMBER, 1919

## EDITORIAL

FROM PRESENT INDICATIONS, general freight rates will increase possibly as much as 45 per cent within the next few weeks. On large shipments this item is worth considering. Beekeepers will do well to take advantage of this advance warning.



### Freight Rates going Up.

ELSEWHERE we have referred to the fact that we are feeding our bees brown sugar to stimulate. Many years ago A. I. Root found that he could use a good grade of brown sugar for wintering bees, but he also discovered that Coffee A, which was the best grade of white sugar we had then, while a little more expensive was about as cheap and a slightly better winter food. There may be some beekeepers who will not be able to obtain enough white sugar to feed their bees for winter and yet can obtain brown. The latter is probably just as good for stimulating brood-rearing as the white, if not a little better; but unquestionably white is to be preferred as a winter food. We have about 1,400 colonies which we are building up for winter. The demand for bees and queens everywhere is very heavy, and we are finding that we can convert sugar into bees for less money than we can afford to go out and buy nondescript lots of bees, taking a chance of disease. By the sugar method we get clean, first-class, pure stock.

At the present writing it is doubtful if the beekeeper will be able to get sufficient white sugar for feeding. Our advice is to get all the white you can and make up the difference with brown. **If you don't have a fall flow, you better not waste any time in getting in your order for even brown sugar.**



THE REPORT we gave in our last issue editorially regarding the shortage of clover honey was nearly correct in spite of the report of July 1 from the Bureau of Crop Estimates, Washington, D. C., that it would be about normal. We have been



### Honey-crop Conditions.

all over the country in the East, and we find that a number and perhaps all of those who reported to the Government that they would have a normal yield found that the drouth set in, and that the actual crop fell short of the earlier expectations. The writer has talked with beekeepers in Michigan and New York—States that, according to the Government reports, would have a normal yield; but the crop will run only from 33 to 75 per cent normal. It is our belief that over clover districts generally the yield of clover will run from 50 to 75 per cent.

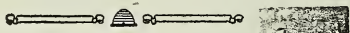
Sage and orange were very short, and the few lots that are left are bringing good prices. There will be the average amount of alfalfa honey thruout the Western States with one or two exceptions. The shortage in some areas will be more than made up by surplus in others. There has been a fair to good yield thruout the Southern States, and above normal in New England; and the prospects are excellent for a good fall flow on account of the rains.

One of the factors during the Great War that had a tremendous influence on the price of honey was the scarcity of sugar. When the housewife, the candy, ice-cream, and soft-drinks people were unable to get sugar in sufficient quantities they turned to honey. Cheap molasses and glucose will supply only a part of the candy trade. The housewife can use only a limited amount of molasses. After that she must have a better form of sweet; and when sugar is not available she will turn to honey. At the present time there is a scarcity of sugar. Whether that scarcity is real or artificial we don't know. For several months back the wholesalers and jobbers have been saying that there would be plenty of sugar later on; but that plenty has not been forthcoming.

If the activities of the United States Government and those of the various States against packers who have been hoarding should release vast quantities of sugar, the price would have a tendency to decline. It might take a tumble. It is inconceivable that either could happen. It has been claimed that there is no sugar in storage—that what there is has gone to Europe. We don't know. We do know that there is a very serious unrest over the high cost of living. The reaction may send all prices downward,

including honey. We don't think so, at least not immediately.

Even the best experts of the country seem to be all at sea as to what is going to happen, and it is probable that one guess is as good as another. To summarize: If there should be a scarcity of sugar, and honey should be taken as a substitute, its price will advance. If, on the other hand, the price of all foods declines, it would be expected that honey would go down with other commodities. It is our guess, and only a guess, that one tendency will offset the other, and that the price of honey will remain stationary.



A MANUFACTURER of invert-sugar syrup is sending out what appears to be a circular to the trade.



**Honey Adulterated with Invert Sugar.**

From it we make the following quotation: "It has been found that honey

can be diluted with two to three parts of invert sugar syrup, and the resulting product can not be distinguished from natural honey." Black type ours. While further on in the letter it is admitted that this adulteration should be "properly labeled," there are some people to whom such a letter might go, who, taking the hint, would not take the trouble to see that the mixture was "properly labeled."

In the first place, it is not true that a honey adulterated with invert sugar "can not be distinguished from natural honey." The United States Government, in a test case, clearly proved that chemists could and did detect the difference, with the result that the adulterator was made to pay a heavy fine. See Invert Sugar in the A B C and X Y Z of Bee Culture.

Buyers should, nevertheless, be on their guard against being "taken in" in the purchase of so-called honey containing invert sugar. While, of course, it is more difficult to detect adulteration of honey with invert sugar than it is to show adulteration with glucose, nevertheless a good chemist will not be fooled in either case.



THE LOSS from careless shipping each year costs the producer thousands of dollars. This waste is so entirely



**Hurting the Market by Careless Shipping.**

needless that no one can think of any possible excuse. The plain fact

is that the gambling spirit in many producers causes them to attempt saving a few cents on cans and containers, while taking chances on a good many dollars' worth of honey.

Buyers in foreign countries as well as our

own are feeling the effect of our poor shipping. This we can ill afford when exports have so decided an effect on the honey markets. In foreign shipments even greater care must be taken than in home shipments. It has been claimed that not a single importer in Italy has been making any profit on the importation of American honey. If foreign importers are to purchase our honey from choice instead of as a last resort, we shall be obliged to make radical changes in our methods of shipping.

Every year quantities of honey are received at Medina in poor condition. In some cases the honey has been removed from the hives before being sufficiently ripened, and has accordingly fermented on the road, oozing from the cans and running all over the car floor. In rare instances, cans arrive in veneer jackets that are fit only for kindling wood on arrival. At other times the cases are too light or too large.

Recently a carload arrived in very poor condition. In almost no time Root's bees had located the car, and soon the air was filled with millions of angry, hissing bees, frightening the passers-by, stinging the horses, and causing great excitement generally. The Root fire company was called out. Some of the men refused to work, but soon two men were on top of the car and others on the ground, with the hose playing all about. The trouble subsided to some extent, but it was necessary to keep up the performance the rest of the day. Not until night did the bees allow the honey to be removed from the car. During all that time the honey was oozing from every crack and crevice. On opening the car the cases and cans were found in the most astonishing confusion. Later we learned that the car had been overloaded, and the contents had to be transferred at Cincinnati to another car. The honey had been leaking so that, during the process of transferring, the bees started robbing, and the freightmen in their frantic excitement threw the cases in like cordwood—endwise, sidewise, crosswise, any way to get there. After these cases had jammed this way and that on their trip to Medina, one may possibly imagine their condition on arrival.

Now that carload represented over \$10,000 worth of honey. Doubtless nominally the railroad will make good the loss. In reality it will come from the pockets of the beekeepers.

In this country the largest part of the honey is now shipped in 60-pound cans, and, if suitably packed, this is a good method. Bulged or rusty cans should never be used. Nor should anyone tolerate a round can, for if knocked over, they are soon battered to pieces. Moreover, the cans should fit the cases, leaving no space for chucking. On the arrival of carloads of honey, one will sometimes notice instances in which the cover has been nailed to the case, driving the nail straight into the can. The hole being at the top, the trouble is perhaps not in evi-



dence until en route; or in some cases, the nail doubtless does not at first penetrate the can, but by constant rubbing, finally causes the can to spring a leak.

Good results are obtained when two square 60-pound cans are shipped in strong wooden cases having the ends and middle partition of  $\frac{7}{8}$ -inch stuff. Any cases lighter than this are too frail. In the West some have tried using fifteen-gallon steel drums. These are especially good for export shipment, and it is claimed that they are practically indestructible.

Most beekeepers doubtless know that there has recently been a proposal by the Interstate Commerce Commission to raise the rate on honey. This is exactly what could be expected while the present carelessness prevails. The beekeeper usually comforts himself with the thought that the railroads will stand all loss in transit. But in order to stand this loss, the railroads are compelled to put their freight rates high enough to bear the loss and still leave a margin of profit; which, plainly stated, means that the beekeepers and not the railroad company ultimately pay the bill.

It is impossible to keep down freight rates when beekeepers show an utter disregard of safety in packing. General freight rates are already high enough without an additional increase on honey. Last fall freight rates increased 25 per cent and now late developments indicate that another rise of from 15 to 45 per cent will be made within the next month or so.

The time has apparently come when beekeepers will be compelled, not only individually to be more careful in packing, but also collectively to look into the container proposition.



THERE HAVE PROBABLY been several more or less related diseases of adult bees



**The So-called  
Disappearing  
Disease.**

that have been described under the name of either disappearing disease or paralysis, due to

their characteristics of the disappearing of the bees from the colonies and the paralytic symptoms of the sick bees, followed often by a disappearance of these various symptoms more or less without apparent cause.

The trouble often shows up at the beginning of a honey flow, when the fielders can least be spared. Sometimes when at its worst, and just as the bees are beginning to store honey, the super will be deserted and the colony will dwindle down to less than half-strength in the space of two or three days. The ground for rods around will be covered with bees crawling—or, rather, running—in nervous haste, for they seem to be trying to get away from something. Shortly the runners become listless, and cluster in little groups and then die. Then, apparently, the trouble will disappear almost as suddenly as it occurred.

Several severe cases occurred in southern California in early May; and, as the trouble came just at the beginning of the sage flow—the only place in the whole county where it was yielding—it cut off the crop instantaneously. But these severe cases seem to be the exception and often by studying the previous history of the apiary, some very good reasons may be found at least to help explain the condition.

When this disappearing disease broke out in the locality in southern California referred to we were called in to determine what it was. All we could say was that it was disappearing disease and that it would “disappear” in three or four days, and it did. We also found what we thought was sacbrood. We were able to offer no remedy or solution for the trouble.\*

A small amount of European foul brood had shown up at the first visit in a few colonies. On the second visit, a week later, it did not look like European but like sacbrood. Here was a case where we needed the Government bacteriologist if we ever did, and we accordingly wired A. P. Sturtevant, who, as we have before stated, was sent to California from the Bureau to study bee disease. He was then in Sacramento, and we told him he must go. He was kind enough to rearrange his plans and go. He reports after going, that, while he saw a little European foul brood, he did find considerable sacbrood, but the dying off of adult bees had practically ceased. Whatever it was, he had some doubt about its being a true disease. Furthermore, a later report comes from Mr. Sturtevant that none of the several samples of sick bees taken at this place and from other similar cases elsewhere, which he examined upon his return to the laboratory in Washington, showed any indication of the presence of *Nosema apis*. This conclusively eliminates this organism as the culprit.

He was not prepared to give a definite opinion, as very little is known about these diseases, but offered the following purely tentative theories after having studied the case from all angles: (1) The adult trouble might have been brought on because the beemen in the afflicted district did not requeen during the previous season, as they had formerly done. This might cause a weakening of the strain, and be due to the fact that the queens did not or could not populate the colonies with young bees before the winter season. (2) It had been an unusually hard winter, even for California, followed by a long dry spring. Therefore when the honey flow did come the old bees did not have the proper vigor. (3) There might have been some derangement of their digestive apparatus due to the sudden honey flow. Mr. Sturtevant found that there was an abnor-

\*Colonies that were fine and strong the week before, just beginning work on a fine flow from sage—the only good sage we knew of—such colonies it was really too bad to see go down to less than half-strength.

mal amount of pollen present in nearly every hive. This, he suggested, might give them too much nitrogenous diet, and this diet might have been in part the cause of indigestion or of auto-intoxication — more likely the latter.

If the adult trouble had been due to a germ disease, it seems probable that it would not, according to Mr. Sturtevant, have struck **every** hive so nearly at once nor so suddenly, but probably would have developed more or less from one or more distinct foci.

As to sacbrood being present also, he thought there was absolutely no connection between that and the adult trouble, further than that the sudden depopulation of the colonies would so weaken them that a secondary disease could develop.

This showed up markedly after the bees began to die off. In Oregon there has been reported a brood disease of some sort along with a somewhat similar disappearing disease.

Mr. Sturtevant tells the beekeepers that there is no need of their melting up combs. So far as is known, he said, the best thing that can be done is to give young queens. This is good beekeeping practice under most conditions. He reports that at the time of his visit the colonies were rapidly building up, and that the beekeepers were very much encouraged.

We have since found the disappearing disease in other parts of the State, but in a much milder form. Along with it in one apiary was a case in which the honey was beginning to sour under the cappings, as shown by the bubbles of gas. At the same time, the bees were spotting up the hives with pale-yellow dysentery marks. An old beekeeper, who had had souring honey in his combs as a result of too much fog in years gone by, made the statement that one would always find bees in such cases crawling and dying in the grass, unable to fly; that the tops of the hives would be spotted with dysentery marks. This rather supports Mr. Sturtevant's theory of intestinal trouble.

Not only from California but also from all over the United States and parts of Canada we continue to receive reports of a so-called disease that affects the flying bees, seriously cutting down their numbers and materially lessening the honey crop. Whether reported as Isle of Wight, paralysis, or disappearing disease, the symptoms are about the same—quantities of crawling or dying bees out in front of the hives, sometimes listless, sometimes extremely active, with various symptoms of more or less importance.

Some authorities whose opinions are certainly worth considering claim the trouble is quite unimportant and not worthy our attention; but when we learn not only of honey crops cut down at least a third, but also of colonies (and in a few cases entire apiaries) being wiped out from this cause

(Herman Ahlers of Oregon lately reported a loss of 400 colonies), we believe it worth while to sit up and take notice.

Later.—Since writing the foregoing a large number of reports have come in from the Northwest, Oregon and Washington, showing that the so-called disappearing disease has been getting in its work. A heavy mortality has occurred in the Yakima Valley, Washington. One beekeeper, W. H. Tucker, with over 200 colonies of bees, which he said yielded him an income of from \$45 to \$50 per colony last year, reports that he will have no honey for sale this year and in addition he lost 80 colonies. Others lost in like proportion.

There seems to be considerable evidence to show that the poison used for spraying fruit trees is one of the causes. Some good orchardists believe it is good policy to spray several times during the season, outside of the usual period of spraying just before and after blooming. During a time when the bees are unable to get water they will sometimes appropriate the dews that fall on the leaves of the poisoned fruit trees. In other instances the poisons fall on the cover crops beneath the trees. These cover crops may consist of red clover or alfalfa, and if so the bees will get a considerable amount of the poisons that fall down under the trees; and there are numerous instances to show that bees are poisoned in this way.

In Massachusetts, where the gypsy moth has done so much damage on the shade trees, poisonous sprays have been used to hold them in check. A large number of bees have been poisoned as the result of these sprayings. There is now some movement on foot in Massachusetts looking toward putting some repellent into the spraying liquids so the bees will not go near the trees that are sprayed. Various forms of sulphur and creosote have been used in the spraying liquids with most excellent results.

There are others in various parts of the country who have suffered from the so-called disappearing disease who say that there has been no spraying of any sort in their respective localities, and that they are sure that what they have had is the real Isle of Wight—a disease and not anything due to poisons nor to indigestion.

While only good guesses can be offered, the editor is coming more and more to the conclusion that whatever we have in America may be due to several causes; namely, poisons, indigestion or auto intoxication, and old age.

As pointed out elsewhere in the article about Harry Warren, too many beekeepers fail to have a large force of **young** bees at the time the harvest opens. When the flow does start, if the colony is made up of old bees they very soon die off and disappear.

We hope our readers will keep us informed, giving us all the information possible; and if there is any disappearing trouble, see if any one is spraying or has failed to have young bees at the time of the harvest.



**M**OST of Nevada is mountainous and much of it is desert country; but Harry Warren, the comb-honey wizard, lives in one of the finest alfalfa sections of the State, about 75 miles from Reno, between the towns of Wabuska and Yerington. As one approaches his home he sees a grove in the center of large fields

## NEVADA COMB-HONEY WIZARD

*Alfalfa Comb Honey. Alfalfa Hay, Alfalfa Seed in Carlots*

By E. R. Root

tions went so far as to state that there was no evidence showing that bees had any effect in increasing the amount of seed from the alfalfa; but Mr.

Warren has demonstrated that with plenty of bees he not only can double, but more than triple, the amount of seed grown per acre. His evidence is so overwhelming that there can be no possible doubt on the question any further because he produces carloads of alfalfa seed. It is a pretty safe rule to give out, when nature furnishes a large supply of nectar as in the case of alfalfa, that there is "method in her madness." She wouldn't do it without a purpose, and that purpose is to make more and better fruit, or seed, as in this case.

When nature desires the visitation of certain insects, she provides doorsteps as well as color, nectar, or pollen in her flowers; and sometimes she supplies all of them, as she does in the case of the alfalfa. Every one of the means that she employs is calculated to attract bees or some insects, and it is evi-



Fig. 1.—Three big tractors and two threshing machines held in reserve for operating the big alfalfa ranch run for hay, seed, and honey.

of alfalfa—alfalfa for hay, alfalfa for seed, and last but not least, alfalfa for comb honey. In order that the Union Land & Cattle Company and the subsidiary company, the Union Honey Company, may carry on their extensive operations, they have the latest and best machinery available, including mammoth tractors, gang plows, threshing machines, big, heavy, stocky teams, 25 employees, a general manager in the person of Mr. Warren, and a superintendent or foreman in the person of Truxton V. Damon. The whole outfit, teams, men, and machines, apparently work like clockwork.

### How the Bees Make Alfalfa Seed.

The combination of bees, alfalfa hay, and alfalfa seed-raising goes well together. It was formerly supposed that bees performed no useful work in pollinating the alfalfa blossoms. Indeed one or two experiment sta-



Fig. 2.—One of Mr. Warren's honey trucks loaded with bee supplies ready to go to an outyard to connect with him and his crew who are shaking the yard into skyscrapers. The men had just changed a tire and were about ready to start out.

dent that nature considers bees not only necessary but essential; and therefore she puts out special inducements for bees. Mr.

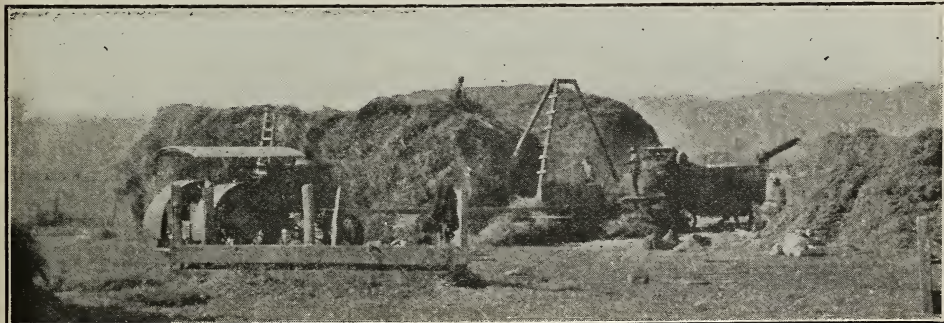


Fig. 3.—A few of the immense alfalfa haystacks of the Union Land & Cattle Company. In the foreground are one of their tractors and a threshing machine, threshing out alfalfa seed. It has been proved that bees make it possible to increase the seed crop 300 per cent in this valley.



Warren has proved beyond a doubt that nature, having put out these inducements, knows what she is doing.

#### Warren's System of Comb-honey Production.

G. M. Doolittle nearly all of his life stressed the great importance of having powerful colonies made up of young bees of the right age at the **right time**. (Notice the black type.) He used to say that many beekeepers made the mistake of having a large force of bees at the **wrong** time. From extensive observation all over the United States for the last 30 years, I know that he was absolutely right. I observed that in California, for instance, many beekeepers had colonies which were too weak for the orange flow but strong enough for sage. They would get a light yield of orange and a good flow of sage. The same holds true of the alfalfa flow. Again the reason why many fail to get a good crop from alsike or white clover is because they don't have colonies strong enough when clover does come. They will often have hives with a large force of bees but **after** the clover is out of bloom. Better late than never is a poor rule here because it generally means failure.

One of the strongest and most consistent advocates of powerful colonies made up of young bees of the **right age** at the **right time**

is Harry R. Warren, the subject of our sketch. According to Mr. Warren, for his locality at least, the average queen will not give him the working force he wants at the first bloom of the alfalfa, so it is his policy,

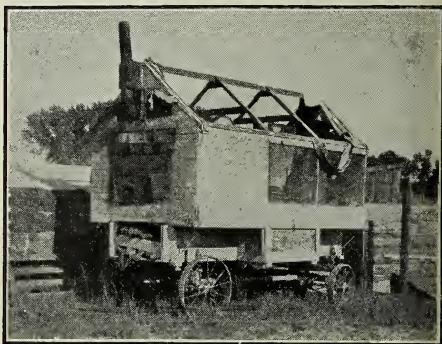


Fig. 4.—Mr. Warren's portable extracting house that he formerly used. He now uses a central extracting station with power equipment, to which he hauls the combs; but, as he runs mainly for comb honey and almost exclusively for it this year, he will extract very little comparatively.

as outlined in our last issue, to throw the strength of two, three, or more queens or



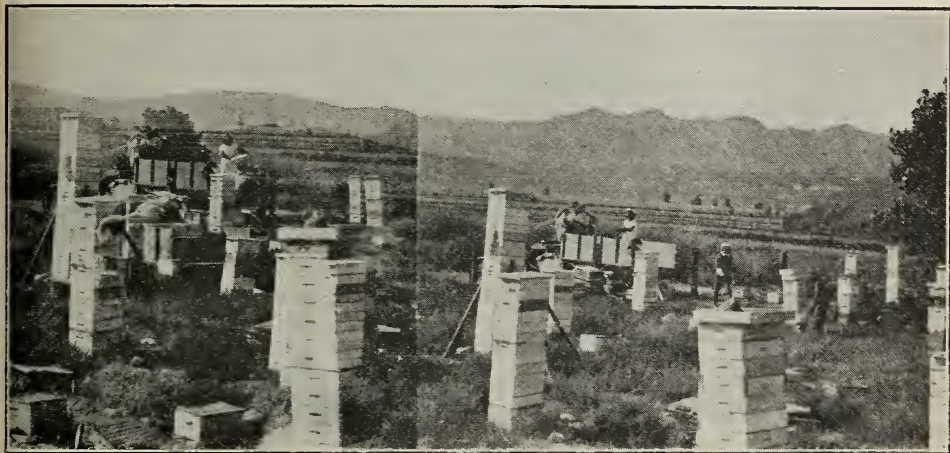
Fig. 5.—Foreman Truxton V. Damon, sitting at the wheel of one of the light Ford trucks. In the background is a heavy truck with one of the men in the act of loading hives and supers. In the extreme background are some of the buildings where the workers of the ranch are housed. At the extreme right is a tent-covered sleeping-room that Mr. Warren himself uses, and the fact that he uses this outdoor sleeping-room the year around may explain in part his wonderful vitality and endurance.



colonies into one, and when he gets thru shaking and the bees are fairly at work in the supers, he has regular skyscrapers. The colonies that are producing comb honey look like tall shafts peaking up here and

often require a stepladder or a box to enable the operator to put on and take off supers.

I knew that our readers would ask for further information and so I placed before



Figs. 6 and 7.—To understand these properly, refer to Fig. 8 with the legend Leneath. These stacked-up supers stand on top of a single shallow brood-nest. These piles contain from two to five colonies all in one. The unsealed brood and very young bees are devoted only to increase, while the entire working force of two or three colonies, with the sealed brood as much as possible in one brood-nest, is forced into one of these piles here shown.

there over a little plot of ground. In the early part of the season there will be a large number of stands; in the midst of the season the colonies' numerical strength drops down, leaving just a few boomers that

Mr. Warren a few questions, to which his foreman, Mr. Damon, replies as follows:

In uniting, the union may be made with from two to five hives, depending upon the strength of the individual hives, the principal idea being to get at



Fig. 8.—A view showing four of Mr. Warren's colonies run for comb honey. Just about as the main flow begins a group of two, three, or more of these colonies are shaken into the best one, when the supers are piled stepladder high, all on one hive. The apiary after it has gone thru this treatment looks like Figs. 6 and 7, with large gaps between the piles where the other hives stood. Mr. Warren follows no invariable rule any further than to bring every colony up to a honey-gathering pitch. To do this he may draw from, two, three, or more colonies.

least one big producer out of the lot. Immediately upon such a union, we endeavor to add the supers in order to provide ample room for the strong colony, and also to eliminate the possibility of swarming proclivities. We do not regard queens, and, as you mention, let them fight it out.

We do not usually re-divide after the harvest, as you state in the August issue, since this method would create an untold amount of extra labor; and besides, we contend that a good, strong colony with sufficient stores will winter better than a weak one. Besides, such a colony invariably winters well and turns out in fine condition in the spring, giving dividing possibilities, with prospects for two or even three producers out of the one, providing they are properly and timely manipulated.

In adding empty supers we have no definite plan to follow. Sometimes we put them below the partly filled, and again above. The transaction just depends upon the amount of time we can spare. Personally, I am inclined to believe that the best method is to add the supers to the top. This condition usually results in complete and nicely filled sections, as the natural instinct of the bee seems to inspire it to finish one job before taking on another. Of course, if the bottom supers are completely filled, then it is undoubtedly advisable to insert the empties below in order to prevent the unnecessary travel stain and extra distances before reaching the place of deposit.

At the present writing it looks as if our crop will run in the neighborhood of ten cars.



THERE is probably no beekeeper who has escaped entirely the irritation of finding unfinished sections of comb honey at the close of the

honey flow. In this part of New England the vagaries of flow make this nuisance quite a serious drawback to obtaining the maximum profit from section honey. This fact and the breakage loss in shipping comb honey to retail trade inspired the invention of the "honey bonbons," which have been

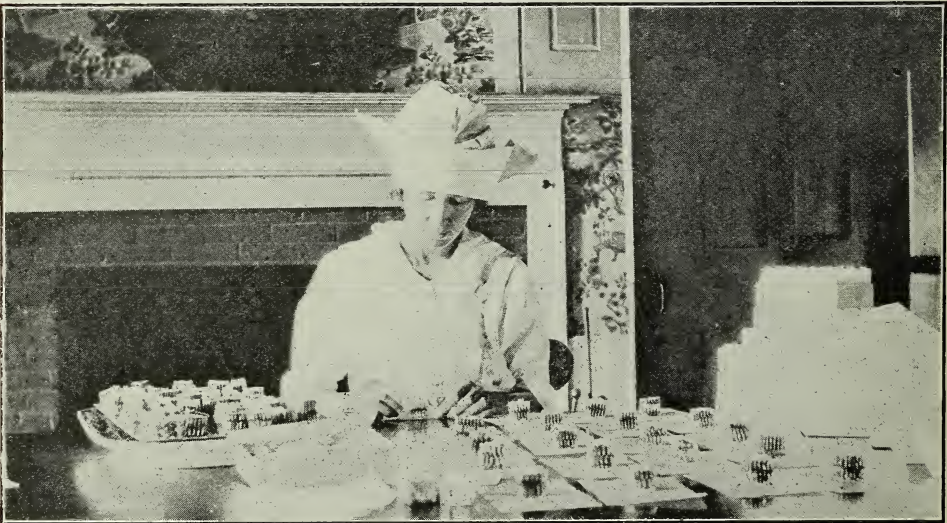
## AN OLD FRIEND IN NEW GUISE

*Honey Bonbons Bring Novelty Prices.  
Comb Honey Cut in Squares, Drained,  
Wrapped, and Sold in Fancy Boxes*

By Dorothy Quincy Wright

comb honey not finished enough to market, making twelve out of a four-by-five section. The squares not wholly capped were discarded, and the perfect

ones dripped overnight on the racks from the extractor. Each square was then wrapper in wax paper and packed in a fancy one-pound candy box, 12 to a box. The daintiness of the package and the fact that stickiness was eliminated in eating the honey, made these boxes so popular for gifts and



The squares of honey are wrapped in wax paper and packed in a fancy one-pound candy box, twelve to a box. These boxes are quite popular as gifts and prizes.

enthusiastically received as a novelty in the candy line.

### My Start in Bonbons.

When the idea was first developed I simply cut into inch squares the sections of

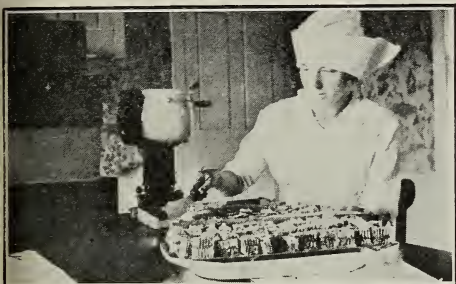
prizes that the demand soon exceeded the supply. In 1916 I changed over my entire section-honey equipment to the exclusive production of this form of comb honey, and so when the sugar and candy shortage creat-



ed an inflated demand for all kinds of sweets I was able to take full advantage of the increased orders.

#### Necessary Change in Management.

In making this form of comb honey a staple crop instead of just a by-product some change in the management of the colonies was necessary. As appearance is of the utmost importance I run the colonies for the light-colored honeys only, aiming for the fruit bloom, clover, and clethra flows. The honey must also be mild in flavor, as it is eaten "straight." A mouth-



A small oil stove with a deep kettle of boiling water in which several long sharp knives are kept in readiness when cutting the squares of honey.

ful of some of these honeys would almost choke the victim if eaten without bread or some neutral substance. As soon as the clethra begins to flag, preparations for the next season's campaign are begun. The hives are requeened, increase is made if wanted, the combs are examined, and excess drone comb is removed. I always count on a heavy goldenrod flow and use this to make bees for next season and to give the colonies a tremendous surplus for winter and spring so they may be at full-gathering capacity when the fruit flow sets in. The brood-nest is always a two-story eight-frame one, over which are the excluder and three or four shallow extracting supers with unwired frames and full sheets of extra-thin super foundation. As soon as the supers are filled they are removed in order to avoid travel stains, but empties are put on immediately. With this management the yield should average nearly 20 per cent more than with section supers, and the swarming fever is kept in check by the large storing space. We cannot get the great increase in yield possible when the colonies are run for extracted honey, as the comb must of course be made fresh each time.

Black bees make the most attractive honey for this purpose, as the air space which they leave between the stored honey and the capping gives the comb a dazzling whiteness which is most attractive to the eye. This should not prevent anyone from Italianizing, as the many vices of the blacks offset this one advantage.

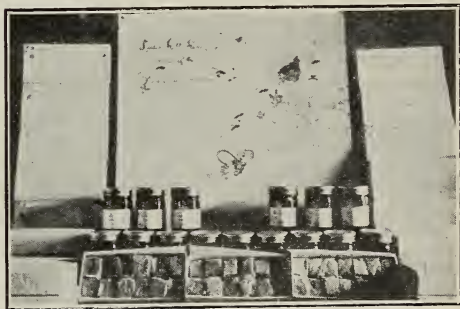
#### Actual Process.

When sufficient filled supers have accumulated they are removed to a large work

table. A small oil stove, with a deep kettle of boiling water in which are several long sharp knives, should be in readiness. The knives should always be hot and clean. I have designed and tried out several forms of tin implements to cut the whole frame at one stroke, but none of them have been so successful as the ordinary thin knife. The frames are laid flat on racks of  $\frac{3}{8}$ -inch wire screening and the whole combs cut out. These are then cut three times lengthwise, making four long strips of comb. Each of these strips is cut into 15 pieces making sixty squares per frame. Thus we get from a full eight-frame super filled and capped perfectly 480 squares, which when packed 12 to a box gives 40 boxes as against the 24 wooden section boxes when the hive is run for comb honey in the regular form and when each section in the super is a perfectly marketable one. This increased production more than makes up for the greater cost of container and the advertising necessary to float a novelty.

The work of cutting and dripping should be done on a warm, dry day. The squares drip over night and the next day are wrapped in waxed tissue paper. The drip from the squares is strained and added to the regular extracted honey. The one point in preparing this form of honey which must be emphasized over and over and impressed upon one's helpers is that of absolute cleanliness and daintiness of preparation, for the honey must be handled and only the strictest surgical cleanliness should be tolerated.

The boxes are ordered from a local box-maker. They are slightly shallower than



Such fancy packages bring novelty prices. The boxes are made to order and are slightly shallower than the one-pound candy box, being made to accommodate exactly the depth of the honey comb and its wrapping.

the one-pound candy boxes, being made to accommodate exactly the depth of the honey-comb and its wrapping. Each holds ten ounces net. The name of the apiary and the weight are printed in green in one corner, and a clover leaf together with the blossom is painted beside the lettering. The wrapping and the packing are done the day after cutting and this is the most expensive part of the work in point of time. By standardizing and planning and not under-

taking too small a unit of work at a time, a fairly speedy system can be evolved. About 20 boxes can be painted and filled per hour.

### Does It Pay?

We reckon that the honey should not cost over two cents per box to produce. The box and paper will cost nearly six cents more, making a total cost of about eight cents per box. If the cost of section honey is computed we shall find the overhead charges on producing honey about three cents a section (the number of unsalable sections makes this item high in our region). Mr. Crane gives the cost of container, or section box, nearly a cent; foundation, the best part of another cent; and carton, still another cent, making a total of nearly 6c a section. In neither case does this cover the cost of shipping cases and spreads. Thus we have with our system 40 boxes per super at a production cost of seven cents per box, as against the regular system of 24 wooden section boxes per super at six cents per section, the first method also yielding an extra superful by the greater speed with which the bees will enter the long frames.

The boxes formerly sold for 35c, but last winter went to 50c, thus keeping pace with section honey.

As in the development of any merchandising idea the second part of the enterprise, the advertising and marketing, is often the harder part of the undertaking. It must be

remembered that one is floating a novelty, a luxury at the price of such; and the public is paying not only for the food in the box but for the appeal to the eye and for the fact that it is "something new." It would be folly to try to sell such a product in a community where the last cent of value is demanded for the money spent; but where one can be sure of a high-class patronage and can give something different, a little better than the average and always dependable, there is no reason why any novelty in honey-packing should not find a ready sale. I have found an excellent way of disposing of the honey is to place it at not too many high-grade shops where a poster and one open box will usually sell it from the start. If the patronage is a floating one, such as the motor trade, the advertising spreads automatically.

These notes are of course only a suggestion as to what can be done in the way of selling fancy honey. This particular package was inspired by a remark made casually by Dr. Gates at Amherst that there ought to be no reason why a fancy grade of honey put up in an attractive box should not bring as high a price as a box of Page and Shaws. It is a case of studying one's market and giving it what it wants, and while it may take strength of mind to feed back all the slightly off grades of honey it is just turning poor honey into good bees with which to gather the fancy crop.

Chelmsford, Mass.



A FULL description of milkweed flowers and of their adaptation to the visits of insects will be found in the A B C and X Y Z of Bee Culture,

page 500; the present article will consider the milkweed only as a source of honey. While this genus is listed in the honey flora from Michigan to Texas and from North Carolina to California, in most localities it is not sufficiently abundant to yield a surplus and the honey is mixed with that from other flowers. In California Richter informs me that it is esteemed of great value and is the source of much honey. While widely distributed in that State it is not found near the coast.

### Abundant in Michigan.

But there is no other section in this country in which milkweed is so abundant and important, or has so great a future before it in its relation to bee culture, as in Northern Michigan. P. W. Erbaugh, deputy apitary inspector, writes that the counties in the northern part of the Lower Peninsula usually contain sufficient numbers of this

## MILKWEED AS A HONEY PLANT

*Spreading Over a Wide Area.  
Yields Considerable Honey of  
Good Color, Flavor, and Body*

By John H. Lovell

plant to yield a fair surplus. In Antrim, Charlevoix, and Cheboygan Counties they consider the milkweed as one of their best honey plants.

Ira D. Bartlett

says that it is also plentiful in sections in Emmet and Grand Traverse Counties. The plants grow on any kind of soil from white shore sand to heavy clay, but as with clover the heavy soil gives the most nectar.

The milkweeds are by many regarded as noxious weeds, and the highway commissioners of Michigan require the plants to be cut; but despite all regulations to the contrary they are steadily increasing, even on farms where efforts are made to check or destroy them. On the other hand, there are farmers who claim that they are a benefit and improve the soil. To a man coming from the prairie States, says Pellett, where milkweeds grow only occasionally, it is astonishing to see them in such abundance. The land in places is completely covered by them, almost to the exclusion of all other vegetation.

After the forests have been lumbered,



large areas are soon covered by dense thickets of raspberries; and in sections which have been burned over there springs up a rank growth of fireweed or willow-herb. But in a few years these plants become less vigorous, and other forms of vegetation begin to take their place. With the disappearance of the forests and the increase of the area of land under cultivation, the time must come when the raspberry and the fireweed will no longer be the chief reliance of the beekeeper of northern Michigan. To what other sources shall he then look for his surplus honey? In southern Michigan the plants which furnish most of the surplus are

### Milkweed Honey.

Already the milkweeds cover much land and are steadily spreading. There are several species, but the most common one is *Asclepias syriaca*, a tall hardy plant with deep roots, which multiplies freely from seed. When once it has obtained a foothold, it is almost impossible to eradicate it. It blooms from early in July to the middle of August. L. C. Gordon of Bellaire, who obtains annually a surplus of 50 pounds of milkweed honey per colony, writes that the flow of nectar is not affected to any great extent by the weather. The color, he says, is very light, in fact, about the lightest honey produced in this section, and is very thick if left to ripen thoroly.

Milkweed honey is described by Ira D. Bartlett of East Jordan as follows: It is very light in color, except in unfavorable seasons, when it is a little darker, altho it would always be classed as white. The flavor is something like clover but stronger, becoming milder with age. The body is good; in hot dry seasons it is very heavy.

Thru the kindness of Mr. Bartlett I have received a sample of pure milkweed honey, which, he says, is slightly darker than the average. The comb is white, but the extracted honey is tinged with yellow, which would promote its sale with most buyers rather than otherwise. It had a very pleasant flavor, not at all pronounced, leaving a fruity tang perhaps a little suggestive of quince. We prefer it to clover honey, and it is certainly well suited for table use, deserving to rank with the best of our northern honeys.

As much as 15 or 16 pounds of milkweed honey has been stored in a single day; but 4 to 6 pounds is nearer the average. On page 594, Gleanings, August 1, 1914, the reader may see a photograph of an apiary in Antrim County where the yield of this honey was 95 pounds per colony. An average of 11 pounds per day for ten days is said to have been obtained in some instances.

Waldoboro, Maine.



Milkweed (*Asclepias Syriaca*.)

white clover, alsike clover, and basswood; but basswood in this region does not yield annually, as every other year it fails to bloom freely, and is not only not abundant, but is becoming rare. White clover does not grow well in the sandy soil of northern Michigan, and it will be long before alsike clover will be extensively planted. Thus bee culture here is likely to be largely dependent on milkweed.

ONTARIO, one of the great unwritten honey localities of the world, may be divided into three regions. The well-cultivated fields and undulating areas of the southern part of the province produce large quantities of alsi-like clover and buckwheat honey; while the wild rocky timber regions of northern Ontario give rich yields from fireweed and other wild bloom; and the Niagara peninsula with the aid of bees produces large quantities of plums, grapes, and other small fruits.

In many parts, beekeeping is still primitive as seen in Fig. 1, but where intensive

## BEEKEEPING IN ONTARIO

*Large Productive Apiaries, Many Producing an Average of Two Hundred Pounds*

By G. G. Gemmell

ever, is making great bounds toward a general up-to-date system. The box-hive beekeeper is beginning to introduce standard hives into his yard and is

beginning to read good bee literature. The beemen are also getting together and forming large beekeepers' associations. This is one of the best methods for promoting profitable beekeeping.



Fig. 1.—James Wrightson's yard of 200 box hives.

bee culture has been practiced, large productive apiaries are operated successfully as will be seen by Fig. 12. Beekeeping, how-

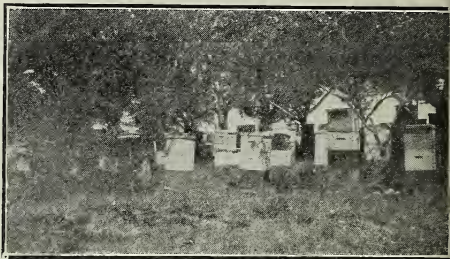


Fig. 2.—Deep hives used by A. E. Jones. These 162 colonies produced 200 lbs. per colony last year.

The enthusiasm of these beekeepers is commendable. James S. Schrank, ex-inspector of Port Elgin, is a fitting example. For five successive years, Mr. Schrank suffered a failure in the honey crop; but still he did not give up his faith in bees, and for this faith he was justly rewarded in the sixth year when his bees harvested a bounti-



Fig. 3.—This thickly populated yard of J. S. Schrank, ex-bee-inspector of Bruce County, contains 300 colonies.



ful crop. Mr. Schrank describes it as having filled every can, kettle, and tub that his good wife could spare, and then, having no room to store more, he lost about two tons.

This spirit of optimism is shared by nearly all the beemen of Ontario. In some localities this year's crop is a total failure

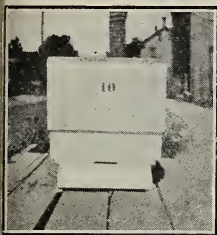


Fig. 4.—Jumbo Buckeye 10-frame hives now being adopted by T. E. Hodgins.

but these men are not down and out. They are looking forward to a bigger and better crop next year.

The failure of a year's crop probably means more to a beekeeper in Ontario than it would in many other localities, as every man's purse for the past five years has been backing the Canadian army, and the failure of a crop means a still further bleeding of the purse. But above all, the beekeeper is still smiling and looking for better things to come.

### Not Much Disease.

Disease has as yet not been very active in Ontario, altho in the southern part a few traces of American foul brood are evident;



Fig. 6.—The prosperous-looking honey-house is owned by A. E. Jones of Paisley. It contains an air-tight room in which Mr. Jones disinfects his combs.

but there is nothing near the per cent found in many parts of the United States. Of course, good methods are taken to prevent its spreading. Besides the usual inspector, a law governing the sale of bees prevents anyone from selling infected bees. There is also a hope among many of the beemen that in the future a license will be charged for every hive. However, as long as these

men continue their good work, they have no cause for worry.

### Crop Conditions.

The crop of this year is far below that of last year. Bruce County, a section that seldom fails and a place where beekeeping is carried on extensively, seems to be faring badly on account of the dearth of a honey flow. It may be stated here that this section affords pasturage for yards of all sizes. A. E. Jones of Paisley has a yard of 162 colonies. J. H. Siefert of North Bruce has a yard of 200 colonies, while J. H. Schrank of Port Elgin has 300 colonies in his yard. These large yards produced an average of 200 pounds per colony last year. These men are hoping for a half crop this year.

### Chute Saves Steps.

The picture on page 574, Fig. 11, shows a chute used by T. E. Hodgins & Son of Kincardine. This is made of half-inch pine about five inches deep and perhaps seventeen inches wide. Besides saving a great deal of time, this chute saves a great many steps in moving the supers and hives from the upper-story windows of the storehouse to the truck. When thru loading supers the chute is pulled up and left in the storeroom.

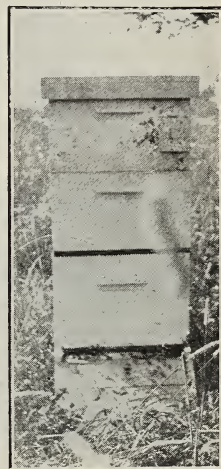


Fig. 7.—To aid in distinguishing between a honey-board and a Porter bee-escape board, E. V. Tillson paints one red and the other blue.

### Large Hives.

A prevailing style of hive for extracted-honey production is one containing a deep

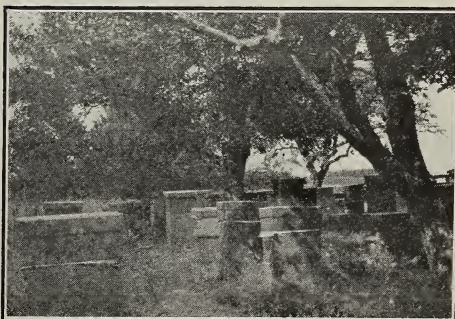


Fig. 8.—Empty supers are used by J. H. Siefert as shade frames.

brood-frame. The Jumbo hive is quite popular, and some very good beemen are going further by using still larger hives. R. F.



Holtermann of Brantford is using a 12-frame hive successfully. In general the large hive is gaining ground, and rightly so. It gives a good queen plenty of room to raise a large working force, to a great extent prevents swarming, and makes a good foundation for a skyscraper. Fig. 9 shows a corner of one of the Hodgins outyards. Note the Jumbo hives used as hive-bodies. Af-

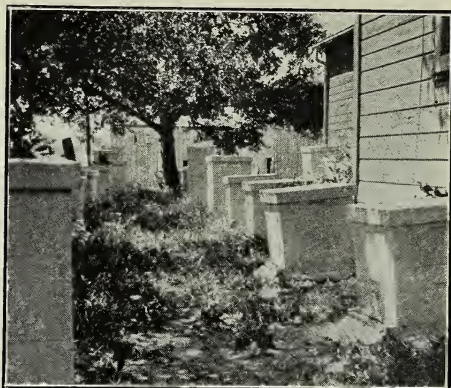


Fig. 9.—A corner of one of Hodgins' outyards of Jumbo hives.

ter the fine success that Mr. Hodgins has had with these hives, he is now adopting Buckeye Jumbo hives packed with granulated cork. He believes this packing will be sufficient for wintering in this climate.

Fig. 2 is a part of the yard owned by A. E. Jones of Paisley. This yard contains 162 colonies in hives that are nearly square. Mr. Jones gets excellent results from



Fig. 10.—This neat-looking yard is owned by Earl Clark of Ingersoll. Clark is a baker by trade and besides producing thousands of loaves of bread a day is managing an apiary of 75 colonies.

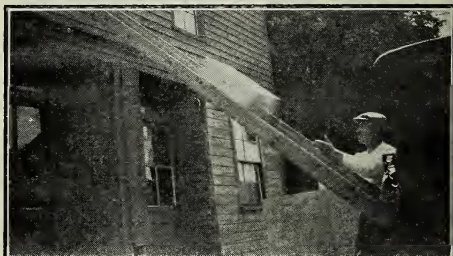


Fig. 11.—The time-saving chute used by T. E. Hodgins and Son of Kincardine. The chute is made of half-inch pine, is five inches deep and about seventeen wide. When thru loading, the chute is pulled up and left in the storeroom.

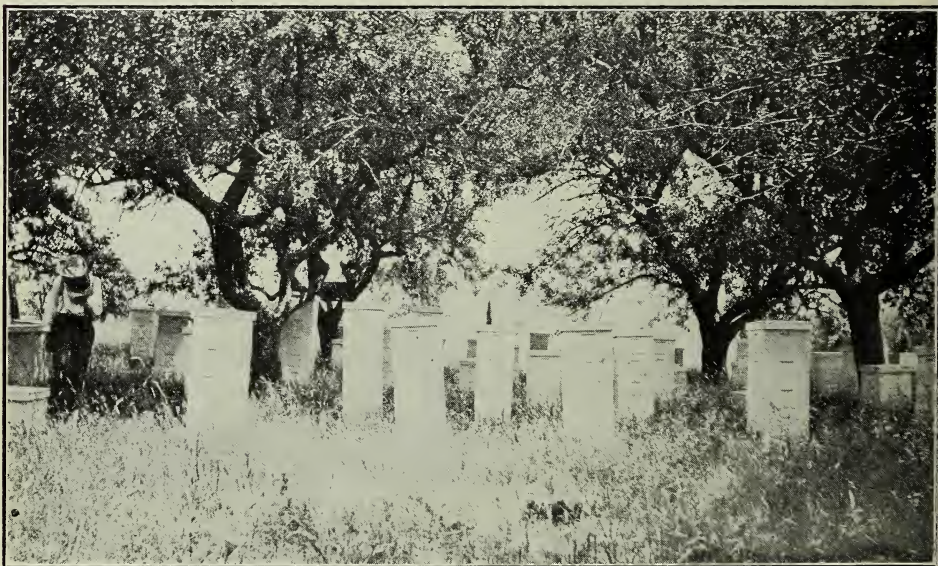


Fig. 12.—This yard shows the good management of its owners. It is owned by T. E. Hodgins & Son of Kincardine.



these deep frames, as will be seen by the number of supers; and this picture, it should be remembered, was taken on July 8 in the fore part of the honey flow. The luxurious honey-house in Fig. 6 is also an example of the prosperity of Mr. Jones' bees.

#### Other Yards of Interest.

E. Clark of Ingersoll, owing to the cramped quarters, has his bees in two long rows as will be seen in Fig. 10. Mr. Clark has surprisingly little trouble with drifting and as he always introduces laying queens he has no trouble with queens entering the wrong hive after the mating flight. However, he intends moving some of his bees to an outyard next spring. Fig. 5 shows the type of hive he uses for wintering. This hive has not been entirely satisfactory and Mr. Clark is now adopting the cork-packed hive shown in the fore part of Fig. 10.

The primitive yard shown in Fig. 1 con-

tains about 200 colonies, all in box hives. They are owned by James Wrightson of Paisley. Mr. Wrightson winters his bees in sawdust-packed hives. In consideration of the antique hives, he has good success.

The shade frame on the hives in Fig. 8 is used by J. H. Sieffert of North Bruce to prevent the sun from overheating the colonies. The frame is made the same size as the hive, from six to eight inches deep, and is placed above the inner cover. Mr. Sieffert being a handy man has many labor-saving devices in his yard. He has 200 colonies of excellent leather-colored Italians.

Fig. 7 shows a very good scheme used by E. V. Tillson of Tillsonburg. Mr. Tillson paints his queen-excluders red and his bee-escape boards blue. In this way he has no confusion in taking off supers of honey. Mr. Tillson also uses the Jumbo hive successfully. Ingersoll, Ont.



ONE day in May Chas.

F. M. Stone of Lamanda Park, and Frank McNay of Pasadena, formerly of Wisconsin, and myself, drove up into

Sycamore Canyon near Los Angeles, where there were two old abandoned apiary sites among the sages. The accompanying pictures show what we found—empty hives and frames that the owners had not come after, and an old solar wax-extractor of yestern days, somewhat typical of sun wax-melters that have been and are even yet used in the State. Last, but not least, we discovered that runaway swarms had found lodgment in some of the old hives stacked up.

Runaway swarms are very common in California. Where old hives are left it is not uncommon to find them full of

## OLD ABANDONED APIARIES

*Visit to Zimmerman and Crowder Gives Points on Roadside Selling, 12-Frame Hives, and Ventilation*

By E. R. Root

they owned the whole ranch.

As Mr. Stone and I were driving down one of the highways we found along the roadside a young woman, Miss Beula

bees. What Mr. Stone and McNay found was no great surprise to them. There were bees there. They "met" us in a way that indicated that they thought

Crowder, selling her father's orange honey produced this year. She was averaging sales of \$25 a day, and getting, in Mason jars, at the rate of 39 cents per pound. No enterprising young man in need of a farm-ette beekeeper to sell his honey or help in the apiary or make his flapjacks need apply, for the reason it may be too late. While the stand is not elaborate or expensive, it does the business, as the receipts



Fig. 1.—The girl who was selling her father's new orange-blossom honey at the rate of 39 cents a pound, in Mason jars, along the roadside. The apiary in the background, not shown here, is shown in Fig. 11. Her sales averaged about \$25 a day.



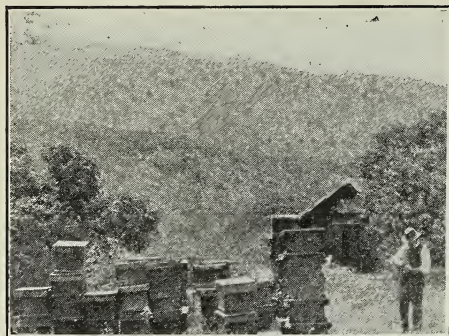


Fig. 2.—An abandoned apiary site, with empty hives and frames and extracting-house up in Sycamore Canyon, near Los Angeles. The frames were whittled out of hard wood. The original owner died a year or so ago; but some stray swarms of bees had found homes in some of his empty hives, as will be seen in Figs. 4 and 5.



Fig. 3.—A runaway swarm that had just started housekeeping in a stack of empty hives of the old Sweet apiary of Sycamore Canyon. The bees evidently thought the hives needed "sweetening" up again. Mr. Stone is inspecting.

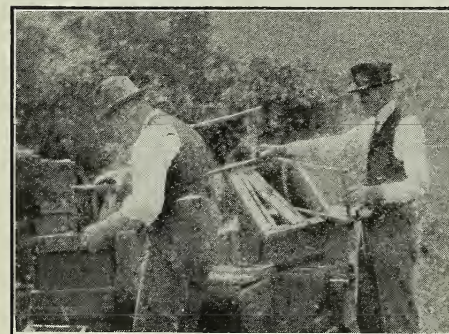


Fig. 4.—Stone and McNay looking for more runaway swarms in the abandoned apiary shown in Fig. 2. Mr. Stone has just located a bunch of bees on those old empty frames.

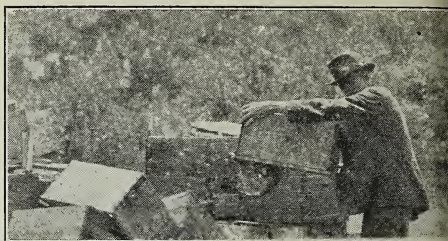


Fig. 5.—Another runaway swarm in that stack of empty hives of the old Sweet apiary. So much comb had been built that it extended down into the lower hive body.

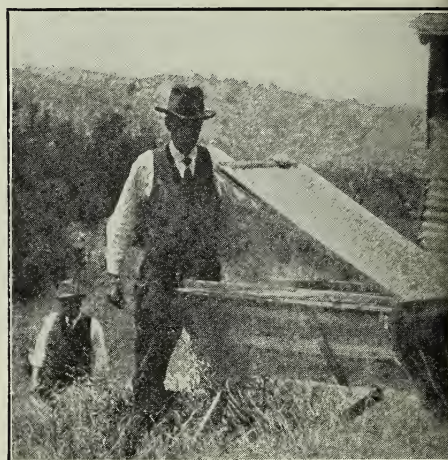


Fig. 6.—An old California solar wax-extractor found in that abandoned apiary referred to in the legends under Figs. 2 and 4. Even now such wax extractors are found in some parts of California.

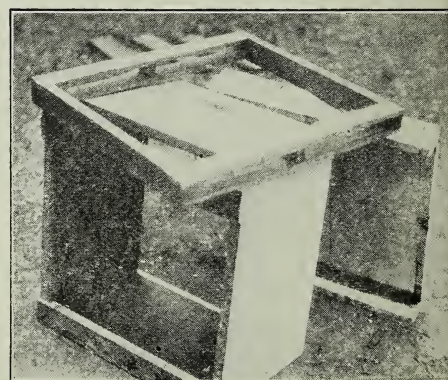


Fig. 7.—The ventilating-frame which goes between the two stories as shown in Fig. 10 is here shown resting on top of the end of the hive-body. It is open at the sides and closed at the ends to give ventilation between the two stories.



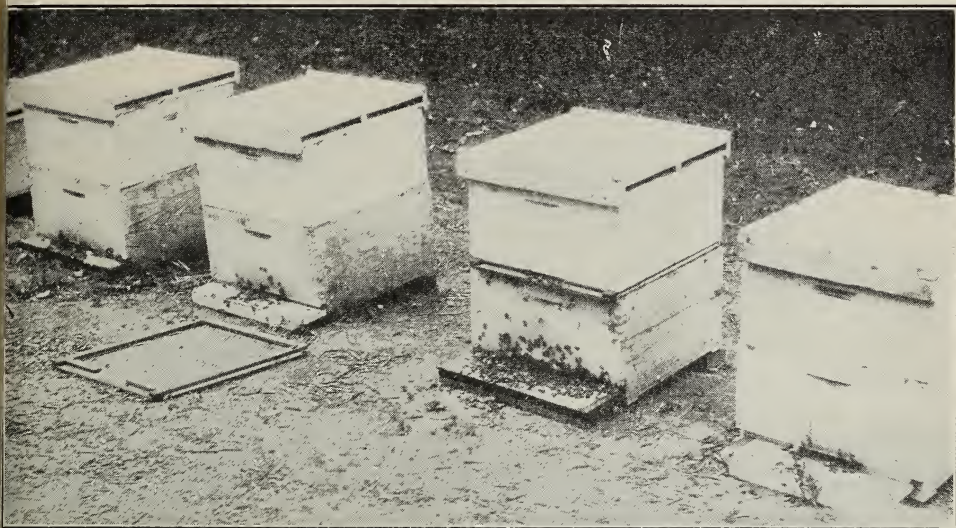


Fig. 8.—Some of the twelve-frame colonies that do not know enough to swarm, as referred to in the legend under Fig. 11. They keep right on piling in the honey. Notice the ventilated covers, which the owners say they will adopt exclusively in place of that shown at the extreme right.

show. Here is a suggestion for some bee-keepers' wives and daughters.

#### Ten- Versus Twelve-frame Hives.

After interviewing Miss Crowder we hunted up her father, J. F. Crowder, of Zimmer-

man from swarming. It is the same old, old story that the Dadants, Holtermann, and others have told us for years. The main objection seems to be that they are odd-sized and too big to lift.

Mr. Crowder testified further that he had always noticed that a hive of any size would be full of brood and honey in a

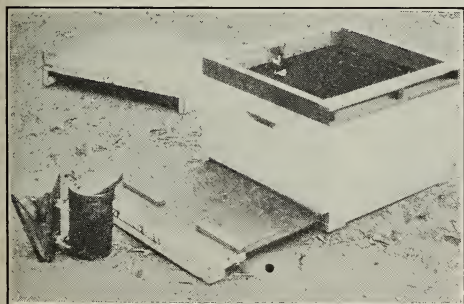


Fig. 9.—The J. F. Crowder scheme of ventilation. See Figs. 7 and 10. The floor-board draws out, leaving the bottom open that is covered by wire cloth in the bottom of the hive-body.

man & Crowder, of Pasadena, and the apiary in the background where this honey was produced. Yes, indeed, there was a very pretty apiary made of three- and four-story colonies about evenly divided between ten-frame and twelve-frame colonies. Dare I tell it? and would you believe it? the twelve-framers hardly swarm at all, while the ten-framers swarm—well, just as all ten-framers do, right in the same yard with the same honey flow and the same management. Both Zimmerman and Crowder testified to the comparative freedom of the big hives

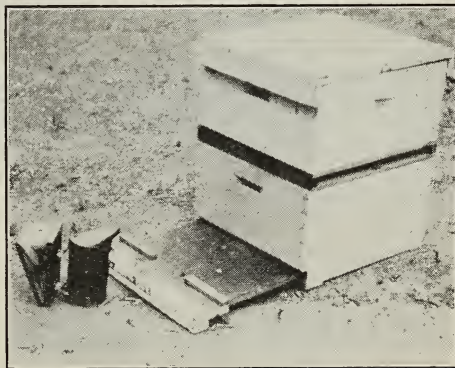


Fig. 10.—The whole scheme of ventilation, in effect, except that the floor-board is removed entirely when the entrance is closed up. The removal of the floor-board exposes the bottom screen, which is always under the brood-nest. After the hives are moved, the floors are shoved back into place, closing up the bottom, after which the ventilating-frame is removed from between the two stories.

good season. He argued if a twelve-frame hive under the same conditions, with the same honey flow, same management, and with the same queen, gave 50 per cent more



honey than an eight-frame, couldn't we afford to do a little more lifting?

#### A Unique Scheme for Ventilating Hives.

Mr. Crowder showed Mr. Stone and me his scheme of ventilation, that is about as unique as anything we have seen for moving strong colonies in hot weather—and they have a lot of that to do in California. Mind you, the weather is hot, and the colonies two-story and strong, just off the orange and ready for another flow after moving. Well, here is the scheme:

He makes all his brood-nests with permanent bottom screens. While the hives are in service a removable floor-board slides over this screen, leaving, when in place, the usual  $\frac{3}{4}$ -inch space between the bottoms of the frames and the floor. It will be seen

available by drawing out the floor-board, and this ventilating-frame between the two stories, are enough. The half-tones will make the idea plain.

#### A Caution About Large Hives.

Before closing I wish to enter a caution. Large hives, particularly the Jumbo ten-frame, are selling as they never did before. I believe that in districts where swarming is common the restriction of egg-laying or breeding is one of the most common causes of swarming. A large hive, ten-frame Jumbo, thirteen-frame Langstroth, or a thirty-frame Long Idea or a two-story eight- or ten-frame Langstroth, when the Demaree plan is practiced, should give plenty of breeding room, with the result that swarming is almost entirely cured.

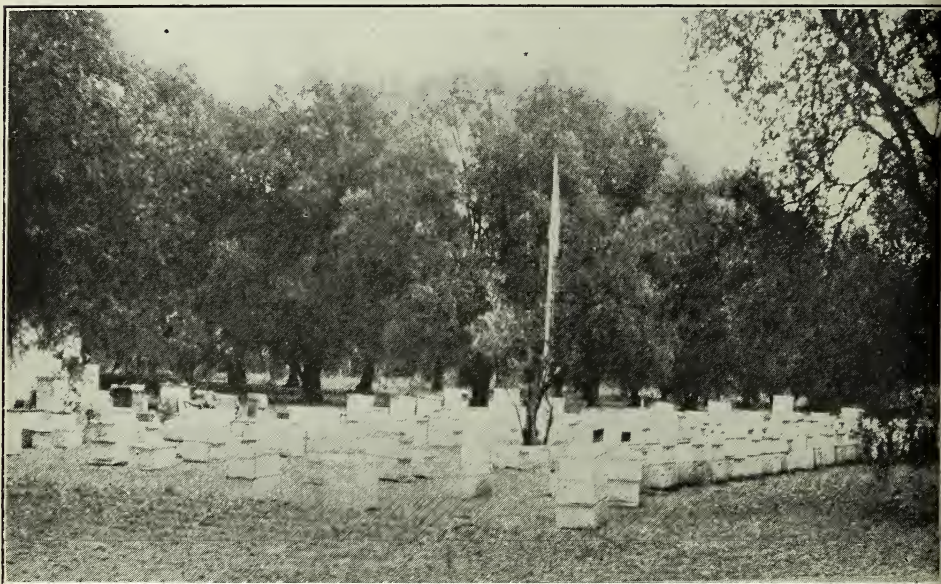


Fig. 11.—In this apiary of Zimmerman & Crowder is an equal number of ten- and twelve-frame hives; with the usual number of swarms from the ten-frame colonies, and almost no swarms from the twelve-frame.

that the hives must be made enough deeper to allow placing the screen below the removable floor-boards. When the board is removed a lath closes up the entrance that is an inch and a half deep. This scheme of providing bottom ventilation may be objected to because of expense and of making the brood-nests deeper than the supers.

But really the "unique" part of the scheme is the ventilator placed between the two stories. This, inasmuch as it can be applied to any two-story hive, is certainly good. It consists of a sort of framework about three inches deep, the sides open, and covered with wire cloth for ventilation. In extremely hot weather, or where the colonies are very strong, a top screen can be used; but ordinarily, says Mr. Crowder, the bottom screen already on the hive and made

The caution I wish to enter right here is this: There is a question whether these big brood-nests are adapted to the production of comb honey; and even for the production of extracted honey they are not suitable for all localities and for some beekeepers. There is the objection of their greater weight; and in some localities where the seasons are short a small hive will actually give more surplus, where a large hive would have that surplus turned into bees that come too late for the harvest. I most strenuously advise trying only a few hives at first. Try out your locality and yourself. The idiosyncrasies of human nature are so varied that what is all right for one man is all wrong in the same environment for another. The ten-frame Langstroth can fit either.





## ANNE LESTER AND DADDY LOWE, BEEKEEPERS



By Grace Allen—Chapter VIII

"DEAR Brother Robert: I don't understand why my letters aren't reaching you. Probably you'll get them all in a bunch. But lest you shouldn't, I'll mention some things I've already told you.

"The most important is Jack Lowe's return—which you may know about. Anyway, he's here and has been for three weeks, having arrived the third of September. And now that the danger is past, I am going to admit to you that for a time we were frightfully worried over Mrs. Lowe. For weeks she was so frail it seemed as tho any unexpected wave of the hand might carry her off. And no news from Jack for so long. Then out of that long silence suddenly came word of his having been seriously gassed. Why it had been so long getting here will probably never be known. How we dreaded telling her. But tho she went even whiter than usual, she lay without a word for a few minutes, there on the sofa; then looked up at her husband with the darlingest smile you ever saw, and said: 'Our baby, Father—a wounded soldier in France!'—as tho the wonder of it lay closer to her mother heart than the sadness or the fear. Then she said it was good to get past the uncertainties, asked for an egg lemonade and proceeded to get well!

"Wires and letters came thick and fast once they started, and almost before we could comprehend the fact, Jack was here himself. Not looking like himself, tho, being a very thin, white, shaky young man, indeed, and greatly distressed over being so soon out of the running. He was to be made instructor at some camp over here, but his strength is coming back so slowly, that may be given up. Tho he still stubbornly plans to go back to France.

"Mrs. Lowe's improvement has waxed apace since his arrival. Of course he has to lie around and rest most of the time, so they are together a great deal. He is devoted to her. In fact, he seems as proud of both of his parents as they are of him, and he wants everyone else to be. I don't blame him. But he has said so often that he is glad I am fond of them both that it is almost funny. How can I help being fond of them?

"The whole neighborhood has wanted to lionize him, but he's as shy as a girl when it comes to things like that. And anyway, he isn't strong enough; so after the first few days we have been pretty much alone here, quiet and serene as always. Daddy Lowe is his old self again—with his son back apparently safe and his wife restored to something a little more substantial than the mere shadow she was. He swings around outdoors somewhat as he used to do, and promptly resumed his interest in the bees.

"'We can make a honey display at the Fair after all,' he told me after Jack had been here a few days. He had previously decided not to. We had to take what space we could get, being the last ones to apply; and then we rushed. It was all new to me. I had never even been to a State Fair before. But Daddy Lowe has exhibited many times, so he went at it like the veteran he is.

"Last week was Fair week. All the honey exhibits were against a row of windows, which certainly made the bottled honey show up fine. Our booth was decorated in red, white, and blue bunting. Everyone else had the same thing, which was as it should be.

"It was fun, just lots of fun, watching the people and listening to what they said. I was often alone in the booth, knitting and looking on and enjoying it all. They did ask the most curious questions! And I pointed out the queens in our glass-walled nucleus boxes a hundred times. And explained about foundation and how to use the extractor, and assured them the honey was pure, and altogether had a picnic. Incidentally I sold some honey, and began to feel remarkably experienced and wise.

"I must tell you one story that a storekeeper from a small country town told me. Once he bought a whole barrel of honey from a farmer beekeeper he knew, having decided to try selling it like molasses. This barrel had a spigot that turned sidewise. Well, of course in a small country town the grocery store is sort of headquarters; so one day when a man sold a prize-winning Barred Rock rooster, he arranged to deliver it to the buyer at the grocery store. At the appointed time he arrived with his rooster and waited around a bit. But the other man was late. So he finally told the storekeeper he'd just leave the bird there if he didn't mind. 'All right,' agreed the accommodating storeman, 'just tie him up, back there somewhere.' He tied him. And on that tying hangs the tale. He tied him to the spigot of the honey barrel. And the rooster flopped and flapped and plunged, in his struggle for liberty and self-government. Everyone heard him using ungentlemanly rooster language and doing his flopping and flapping stunts. But everybody was busy, buying or selling or fighting the war, so no one came back to protest against either his opinions or the unseemly vigor and violence of his conduct. Yet according to later circumstantial evidence, the very first flop, dear Brother, must have opened the spigot! The honey had not only spread thick upon the floor, but in its rush it had completely covered the rooster! He was honeyed from comb to tail and on down his restless yellow legs.

He was sticky and gooey and mussed and miserable. And at last, the deluge being still unnoticed and unstopped, he gave one last powerful lunge that successfully severed him from his moorings. With a rush he skidded down the aisle, volplaned thru the open door and tore on out down the street, squawking, squeaking, flapping, trumpeting his disgust to high heaven and trailing the sticky honey over every spot he touched! Then someone walked thru a sea of honey and turned off the spigot. 'What a mess! What a mess!' groaned my storekeeper narrator, laughing as he groaned. 'Six inches deep over the hull back o' the store. An when that man came back and grouched round bout his rooster bein all mussed up that way, rooster nothin, I ses, how about me losin a hull barrel o' honey, an it costin me a dollar a gallon?' Which proves, says Daddy Lowe, that it happened several years ago.

"We got several prizes, including third on extracted honey. There was a good deal of animated, perfectly friendly discussion among the exhibitors after the prizes were awarded, about the system of judging honey. It was the general opinion that making color the chief deciding factor was unfortunate. Yet no one seemed able to suggest any other really practicable basis. Color and body were the two qualities considered, which I understand is the custom in all judging. (They turn the bottle upside down to judge the body, or thickness, and watch the bubble rise. Quickly up, too thin, possibly 'green' and liable to ferment; slowly up, thick and heavy and rich and ripe.) We all tasted the different honeys, and it was a fact that some of the darker ones were better flavored than the very light ones. Everybody said so, including the winner of the first prize. Yet it would hardly be safe to judge by flavor, because different judges would have different tastes. Unless they had a committee. Oh, well, it's not my problem—and it's certainly not yours!

"At last Theodore has abandoned his foolish farming venture with Mr. Clark, and has his old place back in town. He brought Katherine Clark over here several times after Jack came back. You see she and Jack are old friends, neighbors always, and I have heard several times that they were expected to be more than friends some day. Theodore came along, tho, to tell me good-bye. I was sitting with Mrs. Lowe and, hoping to avoid serious topics, I wouldn't leave her. But presently he said, most seriously, 'Well, Anne, right here before Mrs. Lowe I admit I've given up. I tried hard, and I hope we'll always be friends. But I give up—and admit it.' Now wasn't that like Theodore? And so he went.

"The funny thing was Mrs. Lowe's sur-

prise. She had thought I really cared for him—that way! Later she told me she was glad I didn't. Everyone seems glad. Daddy Lowe said he certainly couldn't spare his apiary assistant, and even Jack, who of course barely met Theodore (and didn't seem to take to him much) seems pleased that he is getting his old place back. Which is nice of Jack.

"You have often said he was a fine type. And so he seems to be. How could he help it, with the parents he has? In his restricted semi-invalid way he has certainly been considerate of me, asking me often to read to him or talk to him or listen to him—trying, you see, to save me from feeling lonesome or out of things.

"One day lately he even took me into his confidence about Katherine Clark—evidently knowing I would have heard about his former attentions to her. He said the week that you and I spent here last winter was a very important one for him, being the week he decided not to ask Katherine to marry him, till after he came home. (How little we suspected, that pleasant week, what an important matter our younger host was deciding!) Well, when he told me that, I kept thinking about Katherine's frank delight in Theodore's return to city life and the fact that she is planning to spend the coming winter in town with her aunt, and I began to fear my secret hopes for Theodore might mean disaster for Jack. I hesitated to say anything—he was so pale and weak-looking—but finally I said I hoped he hadn't waited too long, and wondered if Theodore might count now. He looked at me for a minute as tho he didn't understand, then suddenly laughed, as tho it were funny, and said he hadn't the slightest fear of Theodore. Men are certainly confident creatures.

"I don't know where I'll be when I write you next. Not here, of course. The gap I came to fill has ceased to exist, now that Jack is back. And with him and Mrs. Lowe both getting stronger, I think it would be better for them to be just by themselves. I haven't said anything to them about it yet, and of course they will be all urgent hospitality. They're like that. I expect to go, tho—I'm sure that will be better. And more considerate. But don't you worry about me. Wherever I am, I shall be busy and, except when I think about this cruel war, I shall be happy. Because wherever I am, there will be beauty over the earth and something inside me singing.

"And indeed, Robert, even when I think about the war, I am seldom wholly unhappy. For I always thrill to think how nobleness and righteousness have flamed up in people's hearts and how much closer, when the world is still again and clean, it must walk with God.

Your loving sister,

Anne."





## BEE MANDIBLES and WAX SCALES

### Involuntary Secretion of Wax and Irregularity of Cell Construction

Mr. Bigelow's photos of bee mandibles and wax scales as here shown should convey to the uninitiated a clear idea of wax



The jaws or mandibles of the bees that work over the wax "scales" or "chips."

in its original form and the tools with which it is worked into that marvellous structure, honeycomb.

The comb seems even more wonderful when we watch its building—a dab of wax here, another there, pushed one way by one bee and another way by some other bee. Tho the general effect is one of apparent uniformity, it is far from uniform. The cells are not unfrequently of different sizes, from smaller than normal worker to larger than normal drone. One colony will put the side walls of cells vertically, making a V at bottom and top—the usual way; while another will have top and bottom of cells horizontal. It is idle to speculate as to the why, or why they make hexagonal cells; simply, "'tis the nature of the beast."

The picture of "scales and chips" is of particular interest, as chips are not often in evidence, the bees using them more readily than dropped scales. And by the way, wastage from dropped scales is very small, as can be shown by putting a tray

covered with wire cloth beneath a colony building comb.

It is said that bees "chew the scales and add saliva to them." Perhaps it is so; but, so far as I have been able to discover, propolis only is added and quite a lot of that.

Apparently the secretion of wax is involuntary on the part of the bees, and is governed by the kind and quantity of food they have. Superabundance of nectar or sugar syrup brings the secretion of much wax even in the cool weather of fall and spring; while a similar or great quantity of ripe honey does not produce this effect, except sparingly, either in warm or cool weather.

Providence, R. I.

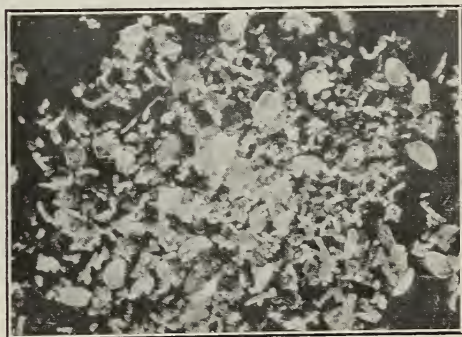
Arthur C. Miller.



## THE QUADRUPLE CASE TO-DAY

### Some of Its Past History and Something About Its Present Status

The quadruple winter case has been so frequently connected with my name, some even accusing me of claiming to be the originator of this method of wintering, that I have decided to tell what I know about the case. First, however, I might say that in all my writings I have tried conscientiously to give full credit for new ideas given me in beekeeping. Still, it is true that my writings in connection with the quadruple



Flakes of wax as originally formed. Also "chips" falling from working jaws.

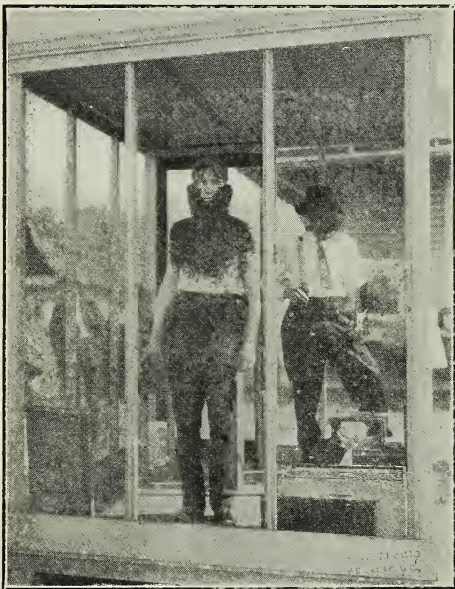
case stimulated discussion, drew attention to that method of wintering, and gave sufficient confidence in the method of outside wintering to cause others to make and test the cases themselves. In 1879 I visited the county of Hildemand, in the province of Ontario, Canada, and found it an old and well-established practice to winter bees four colonies in a case. The strong points of the method did not at that time appeal to me. I kept bees for many years, and had sad and



## FROM THE FIELD OF EXPERIENCE



glad experiences in wintering and trying to winter bees in cellars and on winter stands. Then there came across my path a beekeeper named Jacob Alpaugh, who had been using the case for eight or nine years. He gave me many good ideas, among which was that of wintering bees on their summer stands in



Mr. Wallace with his fur cape of bees. (See page 583.)

a quadruple case with forest leaves as packing. The case was made of half-inch lumber. The bottom, sides, and cover-pieces were held together with cleats made of heavier material. The cover was made water-tight by means of roofing-paper. There was only about an inch or two of packing under the hives, and six inches at the sides, and, I think, eight inches of packing over the hive.

Since first trying these cases I have seen fit to make some changes. Others have also made changes; and of these I would mention one made by a well-known and skillful beekeeper, H. Sibbald of Toronto. He makes the side of the case in two parts. The division in the sides is level with the top of the hive as it stands in the outer case. The upper portion has tacked to the bottom of it a piece of burlap, making a receptacle for all the top packing, which can be removed by one movement. This is cleanly, saves time, and preserves the packing; but, in my estimation, there are serious objections.

First, I like the case deep enough to allow ample room for a super on top of the brood-chamber. Next, in cold or cool weather the packing has to be kept off from

all four sides until an examination of the entire group has been made. Some one may tell me that that is no time to examine bees. We can not always pick our time, and this is particularly true of the large beekeeper. When the diagnosis is made quickly I have never seen any harm done.

Moreover, feeding in the winter cases can not readily be carried on, for there is no room for the feeders and I find it an advantage to feed after packing. The later one feeds, the better; for then the bees have sugar syrup for winter stores, as the last food given is the first consumed. The weather is then cool, and the packing makes it necessary for the bees to utilize less stores to produce the heat necessary for storing and ripening the syrup than would be neces-



Such stunts draw large crowds.

sary if no packing were used. And do not forget that packed colonies are rarely robbed. The ten-pound pail with perforated cover can be turned on top of the frames, and the leaves drawn about the pails or tins.

I consider it an improvement to nail to-



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gether thoroly the outside case and not take it apart during the winter. The bridges forming a passage for the bees thru the packing are all collected as the hives are unpacked, and they are stored in a marked and known place. The packing of leaves is left in each case. This facilitates work in the fall of the year. Where there is no fence about the apiary these cases can be piled two or three high, to prevent the bees from flying low in a direction in which they are not desired. Leaves are not easily secured early enough to pack, but by this method they are always on hand.

In my estimation the half-inch cover is

### EXHIBITS and DEMONSTRATIONS

Wide-awake Advertising at County Fairs. Police to Hold Back Crowds

Having been superintendent of the apiary department at the Southwest Washington Fair for a number of years, I meet with and talk to a great number of people in regard to bee culture, and find that most people have only a hazy idea of the subject.

I try to have my exhibit put up in the most attractive, educational way possible and each day during our fair I give demonstrations outside in a bee-cage. The stunts



Honey exhibit shown by Mr. Wallace at a county fair. In connection with these exhibits, he gives live-bee demonstrations.

not strong enough to hold up the weight of accumulated ice and snow. I would advise the use of inch or  $\frac{3}{4}$ -inch board for covers. Then there is insufficient packing at the bottom of the case. According to Dr. E. F. Phillips, there should be six inches of packing under the hive, and between the hive-bottom and the bottom of the case. Now, there is no use of any one saying it is not necessary, until he can prove that the bees are not compelled to consume more stores to keep up the needed temperature when the packing is not under the hive.

R. F. Holtermann.

Brantford, Canada.

are a great help in holding the interest of the people while I talk to them and try to get them to use more up-to-date fixtures and latest methods. In the "cage picture" I have the bees gathered on me, which gives the appearance of a beautiful cape or fur. The man to my left is my helper Mr. Julian.

Most of the people seem to be very timid and afraid of a few loose bees flying outside of the cage, but while I am pulling off these cage stunts they lose all their fear. It took a policeman to hold the crowd back while I stepped outside of the cage to have the second exposure made. These stunts are both educational and interesting, and



## FROM THE FIELD OF EXPERIENCE



show what can be done with proper knowledge of handling the bees.

The picture of the honey exhibit was made at our county fair. I showed a more complete exhibit at our state fair where I took a sweepstake premium and a number of other firsts. I had also the privilege of demonstrating bees, met a number of prominent beekeepers of Yakima, and altogether spent a very pleasant week.

Do not make the mistake of thinking that beekeeping is all sunshine in this country. We have plenty of troubles of our own. More than all else we are in need of a good, competent bee inspector, and need him badly.

However, in spite of our troubles I may truthfully say that this Western Washington offers big opportunities for the live, wide-awake beekeepers. Our valleys are fine for starting early brood-rearing. Sometimes we have pussy willow in bloom in February. From this on we have plenty of pollen and some honey coming in to keep up brood-rearing. Then later on we have the berries, fruits, and hundreds of other blossoms. About June 15 to July 1, the first fireweed or bear-weed blooms, lasting from six to seven weeks. This is our main flow, and with a fair amount of rain in June, we get a nice surplus. This plant comes in our logged-off lands the second year after being burnt off and lasts from two to three years; then other weeds crowd it out unless it burns over again, when it will again spring up.

The winter problem is not a serious one with us. We winter our colonies on the summer stands. When the hives are kept dry and the bees have plenty of good ripe honey, we have but little winter loss. In this locality lumber is cheap, there are plenty of good locations without crowding other beekeepers, and a good even climate with beautiful scenery. Any time in the hottest weather when working with bees, we can look up and see the beautiful snow-clad mountains in the distance. The blue ocean is within a three hours' auto drive.

Chehalis, Wash.

J. O. Wallace.

### SHIPPING BEESWAX

Double Burlap Sacks are Safer and Cheaper than Boxes

Much has already been said, both in the form of bulletins circulated by foundation manufacturers and thru the columns of the bee journals, with reference to preparing and shipping beeswax; but, as experience shows that the subject has not yet been drained of its important details, we submit herewith a few suggestions, which we trust will be of benefit to the shippers in general.

In the first place, it should be borne in mind that by **beeswax** is meant the rendered product taken from old combs, cappings, etc., exclusive of the honey, dead bees, dirt, and other refuse. It very often happens that some one sends along a shipment of old combs or cappings and expects to receive credit for the entire weight as beeswax. Such credit is quite impossible, for the beeswax must first be rendered from the cappings, combs, or whatever it may be, and credit given on the actual amount of beeswax contained therein. Of course, most manufacturers of foundation are well equipped to do the rendering for the beekeepers who do not have equipment or who do not care to do the work; but there must necessarily be compensation for such services rendered—ordinarily a certain percentage of the beeswax rendered. The manufacturers may be likened to the mining concerns that produce ore—the ore must first be refined at the smelters before the metal itself can be put to any manufacturing purpose. And it is quite impossible to manufacture foundation from old combs or cappings before these have been refined.

Experience has shown that beeswax can best be shipped in double burlap sacks (one sack within another), or in heavy nut sacks which can often be picked up at the grocery stores. Some shippers propose to "economize" by using only thin burlap sacks. This is exceedingly poor economy, for wax shipments are subjected to very rough handling while in transit. The tearing or bursting of a sack means the loss of beeswax from the shipment, which loss must be met by none other than the shipper. Just figure out the "economy" when you lose some few pounds of beeswax from your shipment. The extra sack is insurance on your property. Some persons prefer boxing their wax. Wax shipped in boxes usually gets thru all right if the boxes are strong, for it takes a strong box when filled with beeswax to withstand a jolt by some rough freight-handler. Then boxes make excess weight, for which transportation charges must be paid, anywhere from 15 to 30 pounds or over.

One very necessary point, which is overlooked by many shippers, is the use of tags for the packages. Each and every sack or box should have a tag—preferably linen, which foundation manufacturers are always glad to furnish—attached to it securely, which tag should bear the name and address of the consignee as well as the name and address of the shipper. We also urge that shippers place a card (a piece of strong paper or a side from a broken section serves well) inside each package, giving the name and address of the shipper, to which may be added the gross and net shipping weights. This will identify the package in case the



## FROM THE FIELD OF EXPERIENCE

outer tag is torn off. In some instances, beekeepers club together to send their wax. In such cases, the outer tag should show the name and address of the shipper, while the inner tag should show the name and address of the person to receive credit for the wax.

With reference to shipments of old combs, cappings, or slumgum, which are often sent to foundation manufacturers for rendering, shippers are sometimes rather disappointed at the amount of beeswax secured, especially from old combs and slumgum. On the average, about  $2\frac{1}{2}$  pounds of beeswax is secured from ten full drawn combs where full sheets of foundation have been used. The weight of the combs does not determine the amount of wax they contain, as combs full of pollen, scales, or other waste matter con-



An ad worth while.

tain no more wax than the same number of light, dry combs. Neither is the weight of slumgum a basis for figuring the amount of beeswax it contains. It is impossible to give any rule for estimating the amount of wax that may be secured from a lot of slumgum. The difference in equipment, together with the experience and time given to the rendering of old combs by the beekeeper, is responsible for the wide variations in the amount of wax secured. Cappings also vary greatly in the amount of wax they contain; when well drained they will turn out a greater percentage of beeswax than when heavy with honey. Cappings should be well drained or washed in warm water and dried before shipping in order to obtain the most satisfactory results. Whenever possible, old combs, cappings, or slumgum should be shipped during the cold weather as they can be handled then more easily than during the warmer weather. Such shipments of old combs, cappings, or slumgum may be marked and shipped as "Beeswax Refuse," which takes a lower freight rate than beeswax.

Superior Honey Company.  
Ogden, Utah.

### THE GRANULATION OF STORES

Outside Combs in Wide Hives May Become Almost Useless to the Bees

In all the discussion relative to granulation of stores, there is one important point that I do not think has been mentioned. It does not apply everywhere, but in Colorado, or at least in this part of it, it is a very vital point to be considered; and I believe that in very many other places it has an important bearing on the question. This is, that in a wide hive, such as the 10-frame, the outside combs are so far from the cluster in the winter that they are almost certain to be granulated in the spring. With the soft granulation of the eastern honeys this might not be so very detrimental, tho even with some of them there is considerable waste when the bees try to use it. But with the hard granulation of our honey it becomes a more serious question, as the bees are very loath to use such honey unless compelled to.

I have seen 10-frame hives that for several years (and I do not know how much longer) had been really only eight-frame or even seven-frame hives as far as brood capacity was concerned. The outer frames were filled solid with hard candied honey and were not used by the bees for any purpose whatever. Next to them were the combs used mostly for storing pollen, and inside of them the five or six frames of brood. The outer frames might just as well have been solid boards, except that they had perhaps some value as a reserve that might be drawn on in an emergency. For the most part tho, they were very dead capital. Doubtless you will say that more prolific queens would have compelled the bees to utilize these combs. I do not know. They were not mine and I had no chance to experiment.

I am only telling you of things as I have found them. Another matter of frequent observation was that bees in 10-frame hives did not winter as well nor build up as quickly, on the average, as in eight-frame hives. I do not know just why this should be so. It certainly was not true of my sectional hives, which are of about the capacity of 10-frame hives, tho of only eight-frame width. In these also, there was no more trouble from the granulation of the side combs than in the regular eight-frame hive, the obvious reason for this being that in the taller hive the stores were above the bees instead of being off at the sides.

I believe that in many cases it will be more profitable for the experienced beekeeper to use a larger hive than the eight-frame Langstroth; but when you attempt to justify the present movement toward wider hives on the theory that they are safer for the careless or the inexperienced, I cannot help wondering how often this is true.

Grand Junction, Colo.

J. A. Green.

**W**HEN the honey flow stops I think it is the custom of queen-rearers to continue their work by feeding sugar syrup. I wonder if it would not be money in their pockets to feed honey. I should expect more queens to be matured, and of a little better quality.

\* \* \*

T. W. Riggs, page 510, August Gleanings, springs something new. He says: "Every one knows that in a yard of Italians there are nearly always a few bees in front of each hive trying to get in and steal and occasionally doing so. This keeps the colony always upset and nervous." So much does this hinder the colony in gathering that he has noticed that colonies hid in weeds where the robbers cannot find them average at least 20 to 25 per cent better than the rest of the yard. That's exceedingly important, if true in other localities. But I'm pretty sure it wouldn't work in my locality. When a good flow is on, not a robber will be found in front of any good colony. Moreover, in a time of scarcity I'd trust my bees to find a colony ever so well hidden, if it was in robbable condition.

\* \* \*

"Shade is convenient, but not essential," page 518. I should hardly want to accept that statement without qualifications. There may be places where the bees are better off without shade. In this locality — and I rather think in most localities—I should say it is generally important, and sometimes essential. Remember that the beekeeper as well as the bees is to be considered, and in the hottest days is not shade absolutely essential to the comfort of the beekeeper? When a newly hived swarm deserts its hive, in nine cases out of ten it is because the bees are too warm. To avoid this desertion, ventilation and shade are very important, if not absolutely essential.

\* \* \*

J. L. Byer, page 520, you seem troubled to take such big prices for honey, and say: "The only way I see to square up is to take the money and then shell out some of the proceeds to needy institutions." I sympathize with you in your feelings, but don't you think we can stand high prices for a while until we average up some of the times when we got less than living prices for our honey?

\* \* \*

Years ago I think it was the belief that two laying queens were never to be found in the same hive. Then came reports here and there of two queens, mother and daughter, laying side by side for a time, and finally it was not considered a very remarkable thing, altho still exceptional. I think

## STRAY STRAWS

Dr. C. C. Miller

that has been the belief for a number of years; but now comes C. W. Phelps, page 523, and says it is the usual thing, when a queen is superseded, for

her to remain in the hive with her superseding daughter for a week or two after the daughter begins to lay. I wonder if that can really be the case. Please remember that when bees are left to their own devices, every queen is superseded before she dies. If each queen lives to be two or three years old, then that means that in a third or half the hives in a yard there will be for a week or two each season two laying queens. No, not so much as that, for he doesn't say "always" but "usually." Even at that it seems we should find the two queens much oftener than we do if Mr. Phelps is correct.

\* \* \*

Prof. John H. Lovell, you say, page 522, "It is largely my practice to wear a white veil, altho such a veil is more difficult to see thru." As a personal favor to me, I wish you would give up that practice. A man with the knowledge of posies you have is too valuable to go blind, and I knew one of the veterans to go nearly blind years ago from wearing a white veil. Of course, the white veil is all right if it has a black facepiece.

\* \* \*

"While California is beautiful and the climate delightful, good old Ohio with its beautiful green shade trees and green fields was never more appreciated than now." Thus ye editor, page 489. I wouldn't swap Illinois for Ohio; and the Californian wouldn't swap with either of us. "East, West, home's best." It's well that it is so. The beekeeper seeking a new location will find nine times out of ten that the very best place in the world for him is right where he is. A fairly large per cent of those who have been at no small expense to move a long distance to a new field, after a year or more have repeated the expense to get back to the old home. But it may be worth all it costs to have them then contented. Blessed are they who are contented right where they are.

\* \* \*

Yes, I "take notice," Mr. Editor, of those skyscraper piles, especially Fig. 4, page 493. Now it's up to you to convince Mr. Warren he should adopt those big hives you have been exploiting, so there will be no danger of his piles being knocked over by aeroplanes.

\* \* \*

R. F. Holtermann, you say, page 506, "If I could devise a method by means of which I could, at the close of the honey flow, get rid of all the old bees, and even the half-worn-out ones, I would do so." Well, it would be an easy thing to do as you suggest.



Just move the whole apiary a few rods, leave at the old location a hive in which the old bees might assemble, and then wreak your vengeance on them. Surely you must be old enough to remember the ado that was made about a man who did the very thing you talk about. But I think he has left no imitators.

\* \* \*

J. P. Brumfield thinks that when a man is deciding whether to make beekeeping the business of his life, remuneration should be entirely a matter of secondary consideration; and with this he couples the thought that length of life is one of the things to be seriously considered. Some one might reply, "You're off, Mr. Brumfield; if I have my choice between a business at which I can lay by \$500.00 a year and another at which I can lay by \$1,000.00, I'll take the latter every time. Business is run to make money, and the money that's in it is the only thing to be considered." I like better the Brumfield view. Money is only of value for the happiness it brings, either to its possessor or to some one else. So the man or the woman with a real love for bees has more enjoyment every day as he goes along than he would with twice as much money and no bees. Not only is his life happier, it is longer; and Mr. Brumfield thinks that stands to his credit, for it shows he has been leading the right kind of a life.

\* \* \*

A. E. Lusher, who hauls a large number of colonies every year, and never loses a colony, says, page 524, "I never sprinkle the bees with water, for every one I gave the least bit to always smothered." On page 509 E. F. Townsend says, "For the bees we carried a barrel of water which we sprinkled on the tops of the screens. Another time we would find it convenient to have with us a hand spray-pump to water the bees more effectively." This latter should bring disaster according to Mr. Lusher, and it is very important that we should know which is right. The use of water when shipping bees has been so common, and it is so unqualifiedly recommended in the A B C and X Y Z, that one wonders whether there may not be some mistake about the least bit of water always smothering Mr. Lusher's bees. Just possibly it might be something like this: He never gave water except in a few cases where there was danger of smothering; then he gave the least bit and the bees smothered because he gave only the least bit and didn't give enough.

\* \* \*

On page 530, Geo. P. Smith asks about putting hives close together, perhaps wanting to use as little ground as will answer, and you tell him, Miss Fowls, "In our apiaries we like the hives at least six feet apart, and doubtless a little further would be better." That's all very well as far as it goes, but why in the world didn't you tell him that by putting his hives in pairs he could double the number on the same

ground without increasing the danger of bees getting into the wrong hives? Was it because hives in pairs is a hobby of mine, and you didn't mention it because of spite against me? Anyway, I'll tell you how it is. If the hives are in pairs in a row, and No. 13 and No. 14 are the hives in one of the pairs, you cannot put those two hives too close together except for the danger that jarring one of them may jar the other. The bees of No. 13 will not go into No. 14; if they go into a wrong hive it will be more likely into No. 11 or No. 15, for to them No. 11 or No. 15 has more the look of their own hive than does No. 14. They know that their hive is the right-hand one of a pair, and they'll not enter a left-hand hive. So putting in pairs will allow just double as many on the same ground. [Not exactly "spite," Dr. Miller, but I do kind of like to scrap a little, especially with you. This time, however, I'll have to admit we have



Fig. 1.



Fig. 2.

found grouping in pairs quite satisfactory. Grouping in Fig. 1 looks better and takes up a little less room than in Fig. 2, but the latter is more convenient if two people are working together at the same hive.—Editor.]

\* \* \*

"Bees naturally store honey above, and therefore, during a honey flow, they would be likely to crowd the queen out of the upper story into the lower one and fill the upper one with honey," page 531. Yes, my observation has been that bees naturally build down, keeping their brood below and their honey above. The brood perhaps gets better air below, and the honey above is safer against robbers. Once, and I think only once, I knew them to break the rule. To keep them safe from moths I filled the lower story with empty combs, having the brood-nest in the second story. A heavy flow came on, and those bees promptly filled the lower story with honey, continuing the brood-chamber in the second story. Which only goes to show again that "Bees do nothing invariably."

\* \* \*

Did you ever notice when bees are working on a basswood or other honey-tree, if there is the least breeze stirring there will be few or no bees outside the compass of the tree on the windward side? On the leeward side there will be plenty, no doubt attracted by the scent which the breeze blows in that direction. Making practical use of this observation, always have the door of your bee-tent on the windward side, and if your honey-house has different openings, keep open the one on the windward side.

\* \* \*

Now it's migratory queen-rearing. J. E. Wing of San Jose, Cal., is at it, as reported in the American Bee Journal. When the flow stops, instead of feeding sugar syrup he packs up his queen-rearing outfit and treks 75 miles to a place where a flow is on.

THE season for 1919 has been rather disappointing. In the spring most colonies were unusually strong. There has been a good bloom of clover; but we had a great many rainy days, followed by a low temperature, with the result that only a fair or average crop has been gathered.

\* \* \*

We are trying to clean our sections of propolis this year as fast as removed from the hive—not an easy task, but it has some advantages. We can sort out those that have open cells of pollen, which are liable to develop worms, and can treat them to carbon bisulphide or sell them to the neighbors that drop in for a comb. Then we can sort out any unfinished combs and return these to be finished, if it is not too late in the season; but it is usually a sticky job if the weather is hot. It requires a sharp knife of extra-good temper. Sometimes we have had a dish of water to dip the knife into as we use it. This year we have used machine oil and found it a wonderful help. Set a shallow dish of oil near you, and, as you start on a new super, dip the tip of your finger in the oil and rub it on both sides of the knife blade, and you will be surprised at the ease and rapidity with which you can scrape off the propolis. The oil will keep not only the knife blade largely free of propolis but also the handle and your hands too.

\* \* \*

That item quoted from the Western Honey Bee, page 529, advising to place an empty body below frames of foundation in order to prevent new swarms from absconding, cannot be too highly commended. Had I known it years ago, it would have saved me many a swarm. It is all right.

\* \* \*

Dr. Miller, page 512, thinks Belva M. Demuth's plan of placing extracting-combs on colonies of bees to be cleaned up would be all right if she could only "secure the hearty co-operation of the bees." Well, Doctor, to get the bees to do it right used to be my trouble; but if you will first place an empty brood-chamber over the colony and then pile the wet combs over this, you will doubtless "secure the hearty co-operation of the bees."

\* \* \*

When I opened again the hive having the aluminum comb, I found it well stocked with brood. It was put in so solid it looked pretty good, and, in my enthusiasm, I felt like throwing my hat 20 feet high and shouting—but I didn't, for I am a quiet man. When I looked again I confess I was a little disappointed, for the brood did not seem nearly so compact. There were many

## SIFTINGS

J. E. Crane



cells where the brood apparently had been removed. Fully one-fourth of the cells, I should estimate, in the space occupied by brood were empty. Nearly

all the cells of the two rows on each side of the upright wires that hold the comb in the frame had failed to mature any brood. I have examined it again today and find brood in all stages, and considerable capped brood maturing but somewhat scattering—quite too much so. One comb in one hive is not enough for a very thoro test of the value of these combs; but it is highly interesting to watch developments.

\* \* \*

For one I am grateful to Dr. Miller for his statement that he has strengthened weak colonies hundreds of times by giving a comb of brood with adhering bees. I have done so many times, but have always been afraid it might work harm. Another way I have found useful is to shake a lot of bees without queen into an empty box and confine them for five or six hours with honey enough so they would not be in danger of starving, and then at or near night run them in where wanted. They are so pleased to find a home with a queen that they forget their old home and adopt the new one as their own.

\* \* \*

Every one seems interested in the price honey will bring this year. It appears evident that the crop will not be large—doubtless below the average. There will be a disposition on the part of some to push up the price. This seems to me to be unwise, as last year's prices were all or more than the market would bear. Many years ago there was a short crop, and the advice to beekeepers was to hold on to their honey and that thus the price would go up. Well, it did go up; but when the price reached a high figure the demand dropped off, and a large amount of comb honey was carried over unsold until the next year.

\* \* \*

I was much interested in the article by Jay Smith, page 498, August Gleanings, on safe introduction of queens. If, as Mr. Smith says, it is a sure way, it may well be used in place of some of the quicker and more modern methods. I tried this method more than 40 years ago, using heavy wire-screen cloth for the cage, raveling the wire from the edges so the cage could be readily pushed down into the comb. The difficulty, however, of getting the wire screen of the right size or strength led me to discard this method of introducing. Does Mr. Smith make the saw-tooth tin by hand or can it be bought in quantity? [At present it is not made in any quantity, but there is no reason why a die could not be made.—Ed.]



POSSIBLY some of my beekeeping friends feel that Our Food Page has not been fulfilling its mission because of late it has given so few recipes

calling for honey, and when honey is one of the ingredients in a recipe only a small amount is called for and the balance of the sweetening is sugar. Sometimes too in publishing a honey recipe I have mentioned an alternative sweet. Don't imagine for a minute that I am losing interest in promoting the use of honey as a food, but it seems absurd to advocate the use of much honey in cookery at the present prices. And I might as well confess that secretly I have always had about honey a little of the feeling that a certain man I know expresses about apples. He says, "Why spoil a good apple by putting it in a pie?" I have no objection to the use of honey which is off color or flavor for baking, just as we cook imperfect or spotted apples, but when the price of even second- or third-grade honey keeps it in the luxury class I do not believe much is gained by pushing the use of honey in cookery.

It is rumored that even the large baking companies, that formerly used immense quantities of inferior grades of honey, are substituting invert sugar. Incidentally I hope Uncle Sam will see to it that cakes and jumbles sweetened with invert sugar are not called honey cakes or jumbles, for we beekeepers know that baked goods sweetened with honey substitutes do not have the moisture-retaining properties that are peculiar to honey products.

Here is a question which is often heard: "Is honey likely to lose its popularity because of the high prices?" Time alone will tell, but I believe if we educate the public to regard it as a fine confection of nature instead of little better than a cooking syrup we need have no fear. In the past few years I have often been amazed at the way most of my friends spend a couple of dollars on a box of candy. Now I will leave it to anyone of artistic tastes to say whether a choice section of honey is not as beautiful and fragrant as a flower, and vastly more so than a box of chocolates made by man. We must never lose sight of the fact that nature, set at work by the Creator, has never been equaled by man.

It is interesting and amusing to read of the number of things which are supposed to be substitutes for the drink habit. We are assured that the moving pictures provide a diversion for the man who is accustomed to spend an hour in the neighborhood saloon; coffee houses, tea houses, and recreation centers are proposed; we are told that the sale of candy will be enormously increased now that the country has gone dry. I have no

## OUR FOOD PAGE

Stancy Puerden

doubt that there is truth in all these prophecies and that in addition nearly all other legitimate business will show a decided increase. And here is where

Mr. Beekeeper should get busy; for if sugar and candy help to allay the craving for beer, or something stronger, honey will do the work still better. There, I shall not call honey a beer substitute, but if beer drinkers could have honey every day I believe the craving for beer would be much less, provided of course that the rest of the ration was well balanced. At this point someone may catch me by saying that a man fed a well-balanced ration is not going to crave beer anyway. I am willing to concede that the drink habit is not likely to be formed if the man has always been fed a balanced ration; but after the pernicious habit has been acquired his system craves something which yields energy quickly, and what could be better than honey, which, in addition to being a quick source of energy, is rich in soluble minerals and has not been deprived of its vitamins by so-called refining processes?

Lest you think me over-enthusiastic, let me tell you that for years back it has been recognized that the steel workers in and around Pittsburg have been great users of honey. They have used it to such an extent that Pittsburg is known as one of the best honey markets in the country. A man who is in a position to know informs me that the managers of the steel corporations have done all possible to encourage the generous use of honey among their employes, believing that it lessened the craving for strong drinks. And this was long before country-wide prohibition was regarded as anything but a remote possibility.

### Honey as a Breakfast Food.

As honey in the Puerden household is regarded as indispensable to the ideal breakfast, as much a breakfast food as grapefruit, cereals, toast, or bacon and eggs, I have been glad to see how many other people are beginning to agree with us. In the first place, you may have noticed how often dietitians include honey in their breakfast menus. In a daily paper of a near-by city, which has been conducting a menu contest for some years back, about half the breakfast menus include honey. And prominent food advertisers are wont to advise the use of honey with their particular product, especially if the food they are advertising is known as a breakfast food. Even a small amount of honey for breakfast helps to overcome that disagreeable feeling of faintness and exhaustion with which so many are afflicted in the latter part of the morning. Such people are apt to have little appetite early in the morning and are therefore not apt to

cat enough. Honey not only tempts them to eat a little more but is a source of energy.

### Honey and Peanut Butter.

P. J. Pentecost of Tipton, Ind., writes that his family consider a mixture of honey and peanut butter an excellent spread for sandwiches. He says that it is a good way to use an inferior colored honey, that children like it, and that in warm weather it stays where it belongs. That is all true, and some years ago a firm doing a large honey-bottling business considered putting the mixture upon the market, but as peanut butter is liable to turn rancid in time it was thought best not to feature it commercially. However, it could be mixed and kept in the home icebox for some time without deterioration. Notice that I embody Mr. Pentecost's idea in a sandwich recipe. Such a sandwich is rich in body-building and energy foods and therefore ideal for children.

### Corn Syrup Jelly Not a Success.

Last year, during the sugar shortage, a number of my friends made jelly with corn syrup. While it was not sweet as sugar jelly it had a good texture, was transparent, and stood up well. Those who made only a small amount and used it within a short time had no complaints to make, but several who attempted to keep it over winter reported that the jelly worked.

### Honey in Medicine.

A honey demonstrator, who had worked in cities scattered over the country from New England to Missouri, tells me that I would be surprised to know the number of people who purchase honey to use in medicine. Personally I have little faith in medicine. Fresh air, sunshine, good food, exercise, and hygienic living generally should keep us well; but for the people who delight to dose themselves, honey is not only harmless but a good food. We all know it to be a good cough remedy, but in my experience with croupy children it has seemed to do as much good alone as when combined with some nauseous drug.

A year ago a Chautauqua lecturer in our town had a cold accompanied with an annoying hoarseness. He was an extremely rapid speaker, and by the time the lecture was over he had scarcely any voice left. A honey enthusiast took him in charge, procured a bottle of honey, and prescribed it in repeated doses. The next morning the lecturer said he was much better and hoped to go on with the tour.

#### SAUCE FOR SWISS CHARD OR OTHER GREENS.

2 tablespoons fresh	1 teaspoon salt
bacon fat	$\frac{1}{2}$ teaspoon pepper
1 tablespoon flour	2 teaspoons sugar
$\frac{1}{2}$ cup creamy milk	1 egg or
3 or 4 tablespoons vinegar	1 or 2 hard-boiled eggs

Make a white sauce of the bacon fat, flour, and milk; add seasonings and 3 tablespoons or more vinegar, to suit taste; and beat the egg after removing from the fire.

Left-over hard-boiled eggs may be substituted for the raw egg. They should be chopped fine, and bits of bacon cut fine and added are an improvement. Serve hot poured over the greens; or, if preferred, pass in a sauce boat.

#### PEACH COBBLER.

1 qt. sliced peaches	3 teaspoons baking powder
1 cup sugar	
1 cup water	3 tablespoons shortening
$1\frac{1}{2}$ cups flour	1 teaspoon salt
	Milk

Put the peaches, sugar, and water in a saucepan with a well-fitting cover and simmer about 10 minutes. Make a biscuit dough of the other ingredients, roll out, cut with a small biscuit cutter, and place closely together over the hot fruit; cover and cook 15 minutes without lifting the cover. Serve with the hot fruit dipped over the dumplings and pass cream or butter with it. Canned peaches may be used. Less sugar may be used and honey may be served with it on the table.

#### COTTAGE CHEESE AND MARMALADE SANDWICHES.

Cottage cheese.	Whole wheat bread
Orange marmalade	Butter

Cut the bread thin, keep the slices in pairs and open like a book to spread them. Spread one slice with butter and then marmalade, spread the other with cottage cheese, put together, and cut in triangles.

#### OLIVE SANDWICHES.

1 small bottle stuffed olives	Bread
	Butter
$\frac{1}{2}$ cup salad dressing either boiled or mayonnaise	

Chop the olives which should be the variety stuffed with pimientos and mix with the dressing. Prepare the bread as in the preceding recipe, spread one slice with butter and the other with the olive mixture, and put together.

#### HONEY AND PEANUT BUTTER SANDWICHES.

Honey	Whole wheat bread
Peanut butter	Butter

Mix any well-flavored honey with peanut butter, equal parts, blending them smoothly, spread one slice of bread with the mixture and the other with butter, press together, and cut in any shapes desired.

#### GREEN TOMATO MINCEMEAT.

3 qts. chopped apples	$\frac{1}{2}$ teaspoon cloves
3 qts. chopped tomatoes	1 cup tart jelly
1 box seeded raisins	Grated rind and juice of one orange.
1 box seedless raisins	Grated rind and juice of one lemon
6 cups sugar	$\frac{1}{4}$ lb. citron.
3 tablespoons salt	
1 cup vinegar	1 cup chopped suet, if desired.
2 oz. stick cinnamon	

Cover the chopped tomatoes with water, bring to a boil and drain; repeat twice. Add the other ingredients, simmer gently for half an hour, and can in sterilized jars. If the suet is not used, add 1 teaspoon butter to each pie when baking it. Instead of sugar, part honey may be used and boiled cider may be substituted for the jelly.



I AM so glad to realize anew from page 514, August Gleanings, that there are still a few people left who like to drive around a countryside with a horse and carriage. And don't mind saying so. There are others who do it occasionally, Mr. Crane, leaving the popular pikes for quiet country roads, and turning down shady lanes that lead they don't know where. And don't much care. Sometimes they may be looking for a new location for bees, and watching for clover and locust and aster; but they don't really need an excuse.

There are even those—I know at least two of them—who sometimes take along a box of sandwiches and apple tarts; and when the sun,

"Closing his benediction,  
Sinks, and the darkening air

Thrills with a sense of the triumphing night!"—then in the new refreshing coolness, off on some quiet side road, they open the box, finally shaking out the last crumbs into the concealing dusk. The queer thing is, they don't mind at all, but like it perhaps the more, that it is all so very leisurely and old-fashioned. By contrast it reminds me of the speed demon whom the small boy described by the assertion, "It takes three folks to see that fellah. One says 'Here he comes!,' one says 'Here he is!,' and another says 'Yonder he goes!.' An they gotta all three talk at once!"

That was surely neither a sideliner nor a wise man of any kind. "There was always more in the world than men could see, walked they ever so slowly; they will see it no better for going fast. \* \* \* It does a man no harm to go slow; for his glory is not at all in going, but in being."

\* \* \*

"I take it for granted that a beekeeper generally extracts what honey there is above the queen-excluder. No other system is very practical."—Thus Mr. Holtermann, page 505. That is not, I think, the practice in this section. Most beekeepers here find their brood-chambers at that time, as Mr. Holtermann says his also are, very short of stores, in fact often with practically none—having them nearly filled with brood. So we leave considerable of the honey above the excluder—that is, when the brood-chamber consists of a single standard body. I think I have heard Mr. Buchanan say he doesn't touch the body just over the brood-chamber, which, under his system is one body only at the end of the flow, the other one having been raised, usually over an empty super, at the opening of the flow. With such a generous supply left them, the bees are safe, even with only a slight fall flow. If there should be a big fall flow, there can be an-

## Beekeeping as a Side Line

Grace Allen

other extracting. Where the brood-chamber is made up of a story and a half, and kept at that size thru a honey flow, as many of ours were this summer, we are

almost surely safe in removing all above the excluder; for the little body is apt to be solid honey.

We ourselves have sometimes taken all the honey above the excluder of a single brood-chamber, I admit; but it has been in the acknowledged spirit of the sideliner, who, having only a small yard, can watch each colony individually for stores. Our main flow, clover, fades away from mid-June to July 1, when it is practically at an end. During July, we have usually in this immediate neighborhood that "teasing" sort of flow referred to once by Mrs. Demuth as doing often more harm than good, wearing out the bees more than it benefits them and faster than the slackened brood-rearing can replace them. Bitterweed doubtless leads among these minor nectar-bearers of this period, with a little smartweed a little later, and then a real dearth. However, this bitterweed grows, fortunately, in a narrow area, following a path scarcely a mile wide along the railroad. It runs along the track as far as Memphis.

\* \* \*

Last month we met the nice friendly wife of a pleasant ex-sideliner, and she spoke to us about as follows: "No, I assuredly do not like bees. I like to see them flying around and I'm willing to share my flowers with them, but I don't want anything to do with them. A few years ago I tried to take care of the bees while Mr. Sideliner was gone. The bees would crawl all over him and not sting him, so I was willing to try it too.

"They swarmed a good deal, but I managed to handle the swarms somehow—we had a smoker and such things, and I could put the hives down and get the bees into them without much trouble. But after a while it came time to rob them. Well, I understood I ought to do it towards night, so I started late in the day and began to brush the bees off the honey. Before I got thru it was quite dark, and had begun to rain, and the ground was covered all over with bees, thick, crawling all around. And what they did to me! I was literally covered with stings, all over, and it put me to bed for several days. No, I don't want anything more to do with bees. \* One good thing, tho—you know there's a good side to everything—I had had rheumatism badly up to that time, and tho that was several years ago, I've never had a bit of rheumatism since."

Note to Beginners: Don't try to take your honey by the brush-off-the-bees-in-the

dark-and-the-rain method. Unless you have rheumatism.

\* \* \*

Another story this same lady told us was about a successful young farmer beekeeper of a near-by county who had gone his brave way to France. It probably wouldn't have happened if he had been at home. One day in late summer someone discovered that about half a barrel of honey had started to ferment. They decided it was of no use, fermented. They would feed it to the bees. Thereupon they tipped up the barrel and poured the honey out upon the ground. The bees did the rest.

But their mother was away from home that day, and as she came driving into the place on her return, in her phaeton, behind her own special pet horse, the boys started walking out to meet her. Then they discovered an alarming excitement among the bees. It was as tho every hive had emptied itself of every bee of flying age, and they were all out for spoils—the same spoils. Three feet deep they fought over that honey. And they were wild—mad—utterly beside themselves. The boys made a wild dash to meet their unsuspecting mother, almost pulled her from the phaeton and fairly carried her into the house. Then they ran back to the horse. But the bees had got there first. In 15 minutes the horse was dead.

Note to Beginners: Don't feed honey by the half barrellful, in the open, during a dearth of nectar. Or at any other time. Unless you have too many horses. But remember you have only one mother.

\* \* \*

Among the many myths about bees, current among even intelligent people, one that needs exploding is the idea that bees never sting certain people. These particularly favored ones would seem to lead charmed lives, or carry about them some unconscious spell or magic that renders all bees friendly. The opposite side of the myth of course shows the bees with a bitter antipathy for certain other unfortunate ones who cannot step anywhere near a hive without getting stung, promptly. And, according to the telling, it always makes a much worse swelling and is far more serious than the stings that other people get.

Of course, every real beekeeper knows that the big simple fact of the matter is that the attitude of the bee to the person is largely determined by the person's attitude towards the bee. Fear, with a nervous striking at the first bee that comes humming one's way, brings its own quite inevitable result—a resentful bee and a sting. While fearlessness and composure, a steady quiet bearing and gentle movements leave the bees unruffled and the person unstung. Mr. Gill, "one of the six best beekeepers in the United States," the man who knows his Maeterlinck as well as his markets, says of bees (page 508) that "what they hate most is nervous, jerky, excitable, swearing

people." (Note that last quality!) And he also says of Mrs. Gill and himself, "We work together so calmly that the bees take us right into the family and never sting us." I suspect he meant **practically** never sting; "never," unmodified, is such a big word. But he has touched the keynote and said a thing that all who are beginning with bees should remember.

\* \* \*

One morning while Mr. Allen was riding in a street car to the office, the man next to him started a conversation, regardless of Mr. Allen's open paper. The talk ran along in a rather one-sided manner, till the stranger pointed to a house they were passing. "See that house?" he queried. Mr. Allen saw it.

"The fellah that lives there's the meanest man I ever knew," he asserted.

"So?" from Mr. Allen, as he turned again to his paper, indifferent to the gossip.

"Yeah," from the other, indifferent to the paper; "he used to have some bees."

Mr. Allen folded his paper. "He did?" much interested.

"Yeah. He had bees an a friend o' mine had kidney trouble. He'd done tried everything everybody'd told him about, and then somebody told him bout bee tea. So he ast this fellah to give him some bees for the tea, and he wouldn't do it."

Mr. Allen waited—I suppose with bated breath. But the man had reached the climax of his tale, the meanness of the man who lived in the house. Mr. Allen had to fish to get the rest.

"Couldn't your friend get the bees anywhere else?" he finally prompted.

"Yeah. He knew a fellah out in the country an he give him all he wanted."

"Er—how did he make the—the bee tea?"

"Boiled em up and drunk it."

"I see. And—did it cure him?"

"Naw. Made him better for a while but he got bad again. Finally died. I reckon he'd ougha took it reglar."

"Probably so," Mr. Allen murmured as he left the car at his regular stop.

Note to Beginners: Don't start taking bee tea for medicinal purposes, unless you're willing to take it "reglar." And it might be habit-forming.

\* \* \*

#### SONNET.

TO THOSE TO COME.

Ah, You to Come! You will not know at all  
That I have lived, and thrilled, and deeply stirred,  
And felt my spirit like a awakened bird  
Strike, singing, out—yet here I send my call  
To You Who Come! Down life's resounding hall,  
Strung with old dreams, I drop my singing word:  
And tho it reach you, mine no more, but blurred,  
And lost in deeper chords—ah, may it fall

Within the vibrant heart of some brave youth,  
And turn him from some roaring city's crowd  
To where young beauty walks with ancient truth,  
To where the seed is sowed and fields are plowed.  
To where God walks in gardens while the bees.  
Drift round and hum—to all such things as these.





## FROM NORTH, EAST, WEST AND SOUTH



**In Ontario.**—Continued drouth in many parts of Ontario has cut down prospects of a good buckwheat crop in most places. In our own locality the acreage is larger than usual, but many fields of buckwheat are just nicely up out of the ground, and at best the bloom will be late. Here in Ontario we rarely get much buckwheat honey after the first of September.

The Honey Crop Committee for Ontario, appointed by the Ontario Beekeepers' Association each year, recently met in Toronto and have issued a report for the season. Prices advised are practically the same as for last year, and, judging by the prices of all other articles and the short crop in the Province, there should be little doubt but that these prices will be maintained. Full reports received point out to a reversal of last year's conditions so far as the crop is concerned. Last year the western counties gave a large yield; central Ontario, half a crop; and eastern Ontario, a very light crop. This year the western counties, where most of the producers in the Province reside, have a very light crop—many localities have a total failure. Central Ontario has a medium to light crop, and eastern Ontario has a good crop. Fear is expressed in the western counties that in some localities the clover is all killed for next year. This drouth is quite acute, and includes the districts where most of our bees happen to be situated.

Probably sweet clover has produced more honey in Ontario this year than ever before—largely because there is more grown than ever before, and again it seems as tho the hot dry weather suits this plant so far as honey production is concerned. Personally, as many know, I have never been enthusiastic about sweet clover as a honey plant, but that factor shall not keep me from telling the facts about the matter as proved in our own locality this season. Sweet clover, even by its boosters, has generally been classed as a slow yielder of very thin nectar; yet I positively know of an apiary near us that during the last week in July actually stored an average of 40 pounds per colony in four days, tho there was nothing but sweet clover for them to work on and the weather hot and dry—nothing very slow about that. One of our apiaries near home, that had no sweet clover in reach to amount to anything, stored an average of about 30 pounds per colony. Another apiary eight miles away and in reach of sweet-clover fields (some of which were let go to seed without being pastured off early in the season, while other fields were pastured and thus prolonged the blooming period) yielded an average of 125 pounds per colony. As to quality, certainly it does not equal alsike or white-clover honey, but it tastes and looks mighty good when the other clovers fail to yield.

With the crop so variable in different parts of Ontario this year, some arrange-

ment, whereby more equal distribution could be made of the product, would prove very beneficial in marketing the crop. I have received requests for honey from some of the best producing parts of the province which this year happen to have failures; and just yesterday I noticed an ad in one of our farm journals from a subscriber in one of the best clover counties in western Ontario asking where 40 or 50 pounds of good clover honey could be secured for private use. In many localities people will probably be unable to get honey, while in other places there may be abundance with not enough purchasers. Of course, there is always the wholesaler as a distributor, yet he does not take the place of home trade exactly; and the more honey sold locally, the better for all concerned.

By the time this is in print, fall feeding will be the question of the hour. Present indications are that sugar will be hard to get again, and of course it will be high in price. Many who wintered largely on buckwheat stores last year will be more anxious than ever to get sugar; for in many cases the natural stores gave very poor results last season; while universal good wintering was the rule where sugar syrup was given for the coldest part of the winter. At present there is no ruling against getting sugar; but judging by the present outlook, there is going to be difficulty in obtaining what is needed.

The writer of these notes had the pleasure a few days ago of once more meeting our old friend, Prof. F. E. Millen now in charge of the apiary work for the Province, and who is of course stationed at the Guelph agricultural college. While we were very sorry to lose the genial Dr. Gates, we nevertheless welcome Prof. Millen, who is an old O. A. C. boy, and well known to many of the fraternity. Prof. Millen is secretary-treasurer of the Ontario Beekeepers' Association, and all association correspondence should be addressed to him at the College, Guelph, Ont.

J. L. Byer.

Markham, Ont.

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**In Northern California.**—Our section

must continue to report unfavorable conditions. In the southern and central parts the conditions are decidedly unfavorable; but in the northern, it may be said, they appear much more promising. July was an unusually cool month and crops of all kinds suffered owing to poor growing conditions. Alfalfa has been a keen disappointment, and beemen in almost all sections are reporting from a one-third to one-half a crop from this source. Of course, unfavorable weather and insect pests were the causes of the small crop. About Newman approximately 2,000 acres of alfalfa were lost owing to grasshopper depredations. Those beekeepers that get their crop during June and July are the



## FROM NORTH, EAST, WEST AND SOUTH



heaviest sufferers. The cool weather during these two months has in most instances helped the fall honey plants; and at this writing there are many of us that believe such plants as alkali weed, jackass clover (alkali mustard), yellow sticker, tarweed, thistles, and blue curls have been considerably benefited by the cool weather. If proper climatic conditions prevail during August and September, we should get a fair flow in most regions. A light honeydew flow has commenced along the San Joaquin River. Taking it all in all, the season to date has been freakish. For short periods the bees would work well on certain flora and then desert it, altho in full bloom, and work upon something else. The yield from button willow and melons was practically a failure, and to date hardly any bees have visited sunflowers. Several yards in the eastern part of Stanislaus County have actually not made a pound of surplus up to the beginning of August. Ordinarily we have very little European foul brood during July; but this season, owing to the abnormal weather, there was as much diseased brood as we had in June. It does not now appear that our section will get more than half a crop and we are hoping for a general stiffening in the price of honey.

In an off year such as this, so-called minor considerations may easily receive attention. First of all, why not weed out all poor stock? and next, why not take as much pride in every one of the combs in your hives as you do in those young vigorous queens bred from pure stock? The question of faulty supers and ill-fitting hive covers might also receive attention; and lastly, why not keep a careful watch for skunks, toads, lizards, and bee martins? M. C. Richter.

Modesto, Calif.

\* \* \*

**In Southern California.**—Honey prices are gradually advancing, and white orange honey is offered at 21 cents, with light amber at about 16 cents. As the season advances, the crop prospects seem to show that even a smaller quantity of honey will be produced than any of the early estimates led us to expect. This fact should tend to keep the price of honey advancing.

The market for bees is not nearly so active as it was some three months ago. Buyers were plentiful and one could have sold at almost any price asked. With prospects for a crop as they were in the winter and early spring, and also with the high price of honey in evidence, one could pay a big price for bees and apparently have a fair chance of getting most of his money back this year. The crop is a disappointment to most beekeepers, and the price is not so good as last year. But from past experiences, it would seem as tho with extracted

honey selling at from 12 to 20 cents a pound, it is a good business to stick to.

A man called here a few days ago and said that he intended going into the business. He said that he had enough income to support him but wanted to get into something to keep him busy. He thought that he would put from seven to ten thousand dollars into the business. If you had thought of putting that amount into bees twenty years ago, most people would have thought you "loco" (western expression for a little crazy). This man had traveled quite extensively and seemed to be well posted about locations, honey-producing flora, etc., some things very essential to the success of apiculture.

The sweet clover grew quite abundantly in some localities in the moist bottoms and along the ditch banks, but it is now (July 1) drying up very fast. This plant helps the colonies to get stores for winter, but only in very favorable locations in southern California is there enough to count on for any surplus honey. The blue curl, which often is a good honey-producing plant in the late summer and fall, this year promises little or nothing. Lack of sufficient rainfall during the winter and spring is quite likely accountable for its failure to grow this year. The sumac gave a good flow for a short period and helped very materially toward winter stores in some apiaries. While there was considerable bloom on many other varieties of our wild honey-producing plants, very little honey was secreted. It seems to prove again the old saying that it takes an abundance of winter rains to assure us of a honey flow.

Some of the beekeepers have moved to the valleys where the bees get some eucalyptus, alfalfa, etc., hoping to get enough for winter stores. The alfalfa, excepting in a very few localities where it is grown for seed, is not allowed to blossom in these sections. The farmers cut it for hay just as the bloom appears. About once every four or five years these fields are plowed up and planted to grain. The roots not killed by this process start to grow and often blossom and go to seed. These flowers are sometimes quite a help to the bees.

Reports from the lima-bean districts vary considerably. The older sections report that there is not much hope of any great quantity of surplus honey. These districts are near the coast and on years favorable for beans are visited by very heavy damp fogs. This year there has been a scarcity of these fogs, and the beans do not promise a large crop. Some of the newer localities, where irrigation is used, indicate better results. It has been reported that the honey from these latter fields is of a darker shade than that usually displayed as bean honey.

The beekeepers in southern California seem to be universally disappointed with





## FROM NORTH, EAST, WEST AND SOUTH



the flow from wild buckwheat and white sage. I have yet to hear of a location in southern California that furnished a full crop of honey. Some farmers say that it is the driest season that they ever experienced. The water is very low in the mountain streams. Much of the irrigating water is pumped from wells, and these wells in many cases have been dug deeper in order to get below the water level. This shows a shortage below as well as above the earth's surface.  
Corona, Calif. L. L. Andrews.

\* \* \*

**In Texas.**—The visit of Dr. E. F. Phillips was thoroly appreciated by every beekeeper who attended the summer meeting at College Station. The attendance was small, but those present were able to carry home with them a good message from Dr. Phillips. Only once before, 1906, had Dr. Phillips been in Texas; but he has always been impressed with the possibilities of beekeeping in this State. He found that the beekeepers of Texas are now ready to admit that there is a winter problem in this State. However, few are yet ready to be sufficiently liberal with the bees to leave ample stores in the fall. Realizing the need for further work in this State, tentative arrangements were made to hold a Beekeepers' Short Course during the fall. The program will contain much of interest to every one in the State.

At the annual summer meeting the educational section of the Texas Honey Producers' Association enjoyed the best program in the history of the organization. Every one present was able to profit by the papers presented and the discussions that followed. Some came great distances to this meeting, but felt repaid for their efforts.

During the Farmers' Short Course at College Station a very interesting program was given on beekeeping. This was largely attended by people from every section of the State. Interest in improved methods is certainly increasing. The day of the box hive is doomed—education is winning.

Crop yields thus far have been very good indeed. Prospects are excellent for a good late summer and fall flow. Rains have occurred frequently enough to insure good flows from every honey plant. The price of honey is causing some worry. The price will remain good if the beekeeper does not force it down by putting all the honey on the market as soon as possible.

Now is the time to begin preparations for next season. Many colonies will need requeening. The colony should go into the winter with an abundance of young bees, if work next spring is to be of high quality. Do not take too much honey from the colony. Honey will be needed next spring to build up with. Best results are not secured by a tardy feeding after semi-starvation.

Several additional counties have become interested in the organization of a county beekeepers' association. Beekeepers are very ready now to appreciate the value of organized effort. Co-operation between the association and the State Entomologist in foul-brood control work is a sufficient example of immediate benefit for the association.  
College Station, Tex. F. B. Paddock.

\* \* \*

**In Minnesota.**—There will not be so large a crop of honey in Minnesota this year as was expected earlier. In some localities considerable loss has been suffered from high water. Hundreds of acres of pasture lands have been flooded, killing the white clover. Some commercial beekeepers suffered the loss of their entire crop thru floods. Many have reported that at times the clover ceased to yield while the fields were white with blossoms. There was an excellent yield from basswood in some places, while in others the buds were destroyed by worms. In some localities the crop was much larger than the average, so I believe that taking the State as a whole the yield will come up to the average—perhaps a little above.

But the Minnesota honey crop might easily have been doubled with the same number of colonies, if the beekeepers had only been awake to their opportunities. This year we had a remarkable flow from dandelion, but thousands of colonies came out of the cellar too light in stores to take full advantage of the flow. This summer I have met beekeepers having from 50 to 150 colonies, who have confessed that many of their colonies lived on the border of starvation in the early spring. Many beekeepers are satisfied if their bees have enough honey in the hive to keep them from starving, in spite of the fact that for years our leading beekeepers have emphasized, thru the pages of the bee journals, the "rich-in-honey plan." Mr. Doolittle has told us that after trying all other plans for stimulative brood-rearing he found that there is nothing that compares with the plan of "millions of honey at our house." And now Dr. Phillips and Mr. Demuth are telling us how they have demonstrated that one of the conditions that is necessary to secure a large force of bees ready for the harvest is to see that there is not less than 15 pounds of honey in the hive at any time, so that work will continue in the hive uninterrupted. I believe that if this rule had been adhered to, and sufficient room had been provided for the queen to lay, the Minnesota honey crop would have been double what it will be this year. And right now is the time to make plans for next year. See that each colony goes into winter with enough honey to carry it thru to the honey flow.

Minneapolis, Minn. Chas. D. Blaker.

## HEADS OF GRAIN FROM DIFFERENT FIELDS

### Entrance-guard for Prevention of Robbing.

The accompanying sketch of an entrance-guard is like one made for me by an Italian friend, who kept bees for several years in Italy. He says that such entrance-guards were always used by beekeepers in the lo-



This entrance-guard for prevention of robbing extends clear across the hive. The wires are  $\frac{3}{8}$  inch apart.

cality from which he came, and that they were of great value in preventing robbing. As I have never seen them mentioned in books nor in bee journals, I would like your opinion.

Frank R. Huff.

Chicago, Ill.

[This is of interest, altho we believe as good or better results could be obtained by throwing grass loosely over the entrance and dampening it with water.—Editor.]



### Short Cuts in American Foul-brood Treatment.

I have had a great deal of experience with American foul brood, both in my own apiaries and as a bee inspector. It might be said that, to a considerable extent, I have made a business of curing foul brood, as I

have bought a number of apiaries that were badly diseased and have always been ready to buy any remnant of an apiary, provided the price was such that I could see any profit in it. In this way I have had an excellent opportunity to see how expensive it often is to try to save a little brood or a few combs. While I am not afraid of the disease, I have a wholesome respect for it and regret that some people believe it an easy and simple matter to control foul brood.

I have tried practically every method for the cure of American foul brood that has been proposed for the past thirty years. I have had some success with some of these short methods. I have even been guilty of recommending in the pages of *Gleanings* at least one of these methods, for which I am heartily sorry. The fault with all of the short cuts is that they are not sure cures, and in the long run it does not pay to use methods that may not only require that you do all your work over again, but perhaps a whole lot more in addition. In a very large proportion of cases the disease will break out again, even tho for a time, perhaps for several months, or a whole season, the colony will appear to be cured. All who are familiar with American foul brood know that when once an apiary is infected to the extent that there has been a considerable amount of robbing of diseased colonies, it frequently requires several years of the most careful work to get



Apiary of Page Brothers, Avon, N. Y.



## HEADS OF GRAIN FROM DIFFERENT FIELDS

that apiary cleaned up again. New cases will be constantly breaking out, even when there is no apparent source of infection. The trouble appears to be that infected honey is stored in the hive in places where it remains for long periods without being used for brood-rearing. Then in some time of scarcity, usually in the spring, this honey is fed to the brood, and then we have the disease again. Any method that keeps in existence a dangerous source of infection is objectionable. Short cuts for the elimination of foul brood are not likely to be successful except when used by the expert, and he is the one least likely to adopt them. It is the inexperienced and the careless, the one who does not appreciate the risk he is running or the care needed in all his work with the disease, who is most likely to depend on such methods. The man who has had experience in handling foul brood can cure it, with considerable variation in methods according to the circumstances; but for the inexperienced, I honestly believe that total destruction of colonies that are diseased is not only the safest way, but nine times out of ten actually the cheapest way, to get rid of American foul brood.

Grand Junction, Colo. J. A. Green.



**Keeping Waxworms from** For preserving fresh extracting-combs from  
**Extracting-combs.** damage by wax worms after the extracting season, I have used for over 20 years a method which works well in this locality.

After the last extracting, escape-boards without escapes are put on the brood stories



Dr. C. G. Luft's winter case of poultry netting and tar paper packed with leaves.

of as many stands as I wish to give empty extracting-combs. Four stories of extracting-combs are put on over the escape-boards and left until about Oct. 15, and then put in the honey-house where they are safe until the next June. If carried in on a cold day, the combs will be clear of bees. These combs can be put out any time of day without damage from robbing, if the stands are strong in bees and the hives bee-tight.

Otherwise it is better to wait till evening. If there is foul brood in the apiary, the combs should be returned to the hive from which they came. These views show how I



Apiary of Dr. C. G. Luft, ready for winter.

winter my bees in cases of poultry netting and tar paper, packed with leaves.

Fremont, O. Dr. C. G. Luft.



**The Unusual Flight of a Queen.** A few days ago a small nucleus of mine swarmed out and settled.

I caged the queen and hived the bees. Having the bees in their home and the queen in the cage, I decided to carry her to a queenless colony in a small apiary located over half a mile away on the edge of town. Using the smoke method of introduction I undertook to run the queen in at the entrance of the hive, but she took wing from the cage and escaped. According to regulations made and provided, she ought to have returned to the cage after a short time. Some of her attendants clung to the cage awaiting her return, but she came not. After about an hour I gave her up as lost and returned home.

On going into my garden I saw a small cluster of bees, about a hundred, and others coming, and my queen with them. I caged her again, gave her a larger hive, more combs for her to exercise her laying abilities, and now she is happy at home with her own people.

I am quite sure of her identity. Her appearance was the same as the one I had observed before, and she had come back to within about 20 steps of the place where the little swarm settled when they swarmed out. I inspected all the other hives and nuclei, and found them in normal condition.

Carrollton, Ga.

L. K. Smith.



**Bees Care for Injured Queen.**

One day as I was adding some frames of bees to a hive, the queen left the comb and ran among a group of strange bees on the bottom of the hive. They began to attack her, and, before I could rescue her, one of them caught the

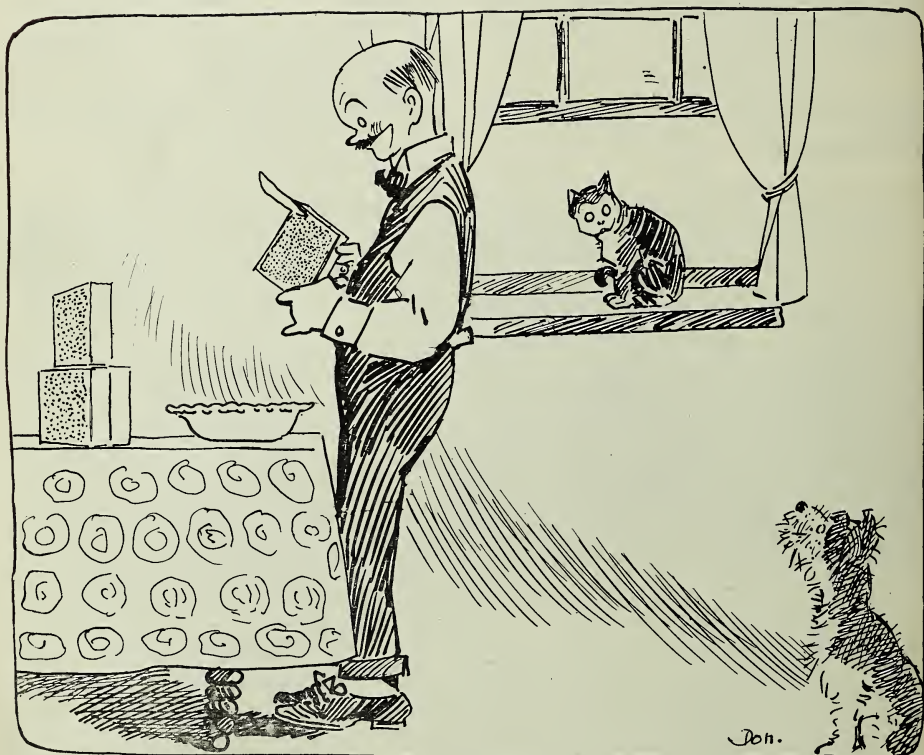
## HEADS OF GRAIN FROM DIFFERENT FIELDS

point of its sting in the queen's side so that it stuck slightly when I crushed the bee and pulled it away. Immediately the queen acted differently from the way she had previously behaved. She seemed hardly able to hold on to the comb; and her own bees, either because of her condition, or because I had held her in my fingers, gathered around her in unusual numbers, feeding her and massaging her with their tongues and working over her. Then I noticed a small welt on her side about the size of a small pin head. This seemed to be about where she appeared to have been slightly stung. At the time I took it for granted that it was a slight swelling from the sting, but since then I have somewhat doubted whether that was possible. It may be that the welt was there previously, and that I had not noticed it. I expected her to curl up and die within a few minutes. Her at-

tendants, three or four minutes from the time I had rescued her, covered her over in their massaging and exceptional attentions, and I did not like to disturb her; but she was on an odd-sized frame that I wanted to remove from her hive, and she had to be removed to another frame. To do this I drove her attendants away with a little smoke and carefully placed her among others of her own bees between two brood-combs. She still seemed weak and dazed. She was immediately surrounded by a new retinue of nurses, that seemed to recognize her need of attention, and they repeated the performance of the bees from which I had just removed her. I closed the hive fully expecting to find her dead in front of the hive the next day, but a few days later I found her apparently as well as ever and laying nicely.

Seattle, Wash.

H. H. Benton.



THE BACK LOT BUZZER.

*The war is over, booze has passed away, an' the wimin have the vote. Maw says, "There's nothing to worry about now but th' hives."*



**N**OW that the honey has been harvested, the best of care should be given it until disposed of. The comb honey should be carefully stored, with no opening large enough for the admission of the wax moth, otherwise the honey may soon be in a disgraceful condition. If any sections are cased and are to be sold at stores, there may occasionally be a few having beebread. If so, these should be kept for home use or sold for immediate consumption. Honeys from various sources differ greatly in their tendency to granulate or solidify, some granulating in a few weeks and some remaining liquid for a year or two. The temperature at which comb honey should be stored, as stated last month, is between 70 and 90 degrees, for if comb honey granulates it is unsuitable for market.

#### Care of Extracted Honey.

Well-ripened extracted honey may be kept for years with no special care on the part of the beekeeper. To be sure, it will granulate, but this will not injure its sale as in the case of comb honey. In fact, extracted honey ships all the better when candied, since there is certain to be no loss from leakage; and when one wishes to bottle the honey, it may be easily liquefied without injuring its flavor by heating in a hot water jacket to about 150 degrees and then bottling while still hot, at about 140 degrees. If extracted honey is stored for a time, it should be left in 60-pound cans or in small enough containers so there will be no difficulty in melting it after it becomes candied. If left in a large container, removing it after it solidifies will involve considerable work.

#### Hurting the Market.

The step at which the beginner is most likely to fall down is in the disposal of his honey. Just why, we cannot say, but the man or woman with a few colonies almost invariably gives all the honey away or sells far below the market price. Now if a beekeeper chooses to give his honey away, that is his own business; but when he sells at so ridiculously low a figure as he often does, then it becomes the business of every other beekeeper. In most localities there are one or more beekeepers who cannot sell as their fancy dictates, but are obliged to make their living from their bees. Such beekeepers are often compelled to hold their honey until the smaller beekeepers are sold out, and even then they are handicapped by the early low prices. At the present time there is no reason why any small producer should get less than 30 cents a pound for his honey in small packages, and many are getting even more.

Another way in which the beginner sometimes injures the market is by his careless preparation of the honey. The sections

## TALKS TO BEGINNERS

By Iona Fowls

should be nicely cleaned and attractive in appearance. The unfinished and off grades should be used at home. Extracted honey should be in clear glass with

neat labels, and no scum of particles of wax and other material should be tolerated.

#### Care of Combs.

If the extracting combs after being cleaned were piled carefully so that no moth miller could find an opening large enough to enter any of the supers, the combs will now probably be all right; but as long as hot weather lasts they should be examined every two weeks or oftener, and if wax worms appear, the combs should be placed over strong colonies to be cleaned. Combs are altogether too valuable to be lost thru carelessness.

#### Time of Fall Feeding.

In some northern localities there is little or no fall flow, and breeding practically stops in September. Under such conditions, if the bees have not enough stores for winter, they may be fed in September. But in case there is a good fall flow, feeding may be delayed until October when there is less brood and therefore more room for storing. It is always an advantage to feed early so that the stores will be well sealed. When first placed in the cells the stores are too thin for good wintering; but if there is time before winter, the bees evaporate, or "ripen" the stores until of the right consistency, when they are sealed. Stores too thin or in any way poor often cause dysentery and death of the colony before spring. For when bees use poor honey, it results in more waste matter, and bees normally void their faeces in flight. Therefore if unable to fly for some time, this matter accumulates and often causes the death of the bees.

#### Requisite Stores.

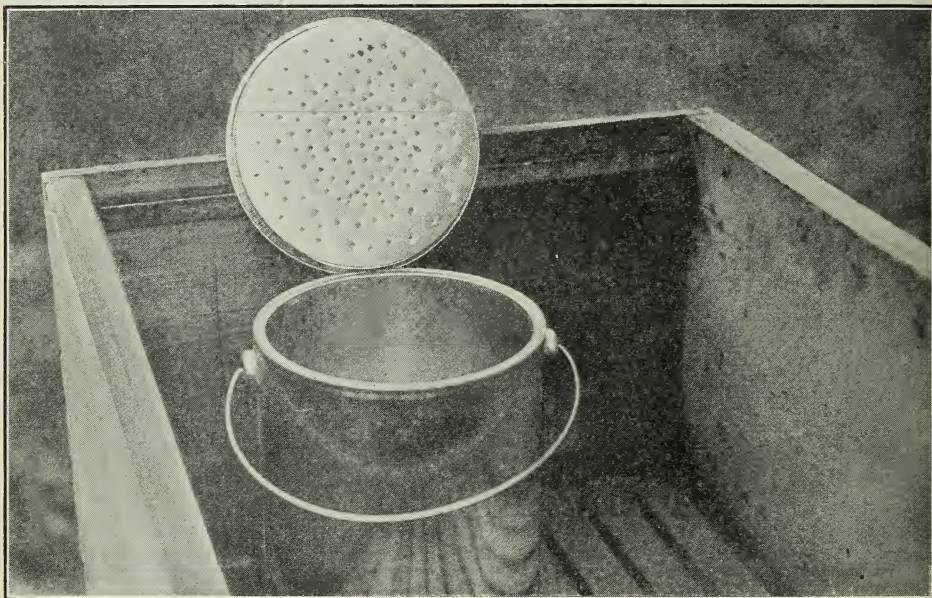
Those colonies wintered outdoors should be left with from 30 to 35 pounds, depending upon the size of the colony. It is probable they will already have considerable honey in the brood-chamber. Each full, standardized Hoffman comb contains five or six pounds of honey, so that by handling each frame and noting the sealed honey it will be easy to arrive at a general estimate of the amount of honey in each hive, and therefore the amount that will need to be fed. We do not estimate the unsealed honey since it is generally used up before winter. Each hive should be marked with the amount to be given. If one intends wintering in a double-walled hive, the 30 to 35 pounds of stores should be contained in seven or eight frames so that, if desired, the brood-chamber may be contracted as will be described next month.

There is considerable difference in the

wintering qualities of honeys, some of them having too large a per cent of resins and gums to be a good winter food. As already stated, if bees have frequent flights, such food is safe; but during the dead of winter it is apt to result disastrously, so that to be on the safe side, we have for years given each colony as much as ten pounds of sugar syrup to store on top of their honey. The colonies will probably not use more than ten pounds during the most severe weather, and so the syrup being fed last will be used first, and the bees will not get down to the undesirable honey until spring when they

may be placed at the side of the hive, to be removed later at the time of packing when the brood will have hatched.

Whenever there is a chance for a choice in the matter, old dark combs should be left at the center of the hive for the bees to cluster on, since the cocoons in the cells make such comb much warmer than new light comb. Wherever the last brood hatch there will be empty cells. As winter comes on, more than half of the bees will crawl into these empty cells using the cells for overcoats, the other bees clustering in between the combs and these overcoated bees.



The 5- or 10-pound friction-top pails with pierced lids make good feeders. Two parts of sugar to one of water is about right.

will be able to have frequent cleansing flights, and thus avoid dysentery.

#### Examination of Colonies.

While making the estimate on the requisite amount of stores, there will probably be no honey coming in, and therefore care should be taken not to start robbing. If any colonies are weak, their entrances should be contracted, and if the hives are open for any length of time it may be necessary to use a robber tent, for it would certainly be very bad for the colonies to become unduly stirred up at this time of the year when they should be quiet.

During the work, if weak or queenless colonies are found, they should be united with others; or the queenless one, if strong, may be given a good queen by the cage method. Crooked combs or those having too large a per cent of drone comb or too much bee bread should be removed; or, if there chance to be some brood in them, they

Thus the bees during cold weather are in a compact spherical mass. This part of the combs which they occupy is called the brood-nest. If possible, the brood-nest should not be disturbed since this affords a good clustering space for the bees.

#### Method of Feeding.

The friction-top pail offers a very easy method of feeding. The lid is pierced full of holes made with threepenny nails or in some cases by machinery. These feeders are filled with syrup made of two parts of sugar to one of water, or even denser if late in the season; for late in the fall the bees become rather sluggish and if given syrup too thin may not evaporate it sufficiently. In cold weather the syrup should be thick and warm when fed.

When the syrup is ready to be fed, a deep super should be placed over the brood-chamber, the pail of warm syrup inverted

(Continued on page 617.)



THE East Tennessee Beekeepers' Association, on July 29, held its first all-day field meeting at the apiary of Curd Walker, Jellico, Tenn.

The organization will plan another field meeting at an early date.

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P. C. Chadwick of Redlands has moved to Delano, Calif. A lack of honey flow caused the move as his queen-rearing business could not be maintained at a profit in the South. This is perhaps the most giant undertaking by truck transportation yet attempted. He made a 30-hour continuous run, with relief drivers, and transported 200 two-story standard colonies, and 200 queen-mating hives, with a loss of only one-half of one per cent.

\* \* \*

The annual field-day meeting and basket picnic was held by the Massachusetts Society of Beekeepers at the nurseries of M. W. Barrett, Hyde Park, Mass, Aug. 9. Prizes were given for the best sections of honey, the best demonstration of handling bees, and for the best hive of Italians. Professor A. C. Miller was the principal speaker.

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The Minnesota State Fair and Victory Exposition, which is to be held at Hamline, Minn., from August 30 to September 6, gives considerable emphasis to bee culture, offering in this department \$1,100 in prizes. There are now 20,000 people engaged in beekeeping in Minnesota and it is estimated 15 million dollars' worth of nectar is going to waste each year. Minnesota appears to be keenly awake to the possibilities of beekeeping in that State.

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Mr. Rae, formerly of the Bureau of Entomology, as announced in our last issue, had been working in New York, helping the beekeepers of that State to solve their bee-disease problems. He left the State to go into other business; but so long and urgent was the call for him to return that now he is a regular employee of the Department of Agriculture at an increased salary. When we heard that he had left beekeeping and gone into an entirely new field of work we felt just as we now feel about Dr. Gates—that the business had lost a valuable man. Mr. Rae has reconsidered and is now back in the ranks. May we indulge the hope that Dr. Gates will likewise come back to his own. He still loves the bees and his many friends engaged in keeping them.

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There was a large field meet of Ohio beekeepers on August 7 that met at the apiaries of F. W. Leininger & Son at Delphos, O. Ohio beekeepers were especially favored

## JUST NEWS

Editors

by the presence of B. F. Kindig, State Inspector, of Lansing, Mich. Mr. Kindig gave an address on the subject of organization and bee diseases. He is one

of the wideawake state apiarists of the country and at the present time is president of the National Beekeepers' Association. There were other addresses given; among them were two by E. R. Root, editor of Gleanings.

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There was another enthusiastic field meet which the editor attended on August 9. It was held in South Lancaster, Mass., at the apiary of Miss Morse. While the crowd was not large, the enthusiasm was of the very best. Dr. Burton M. Gates, formerly professor of bee culture at Amherst, Mass., and later of Guelph, Ont., was scheduled to speak, but was unable to come. After some business was transacted, Mr. Root was given the whole afternoon. A basket lunch was served at this meet that was very enjoyable. The general report was that the season had been exceptionally good.

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The editor recently attended two very important field meets, which he intends to mention at greater length in the next issue. The Eastern Massachusetts Beekeepers' Association was held on July 26 at the home of Charles I. C. Mallore, Boston. The principal speakers were Dr. Burton N. Gates, Arthur C. Miller, J. C. Frisby, and E. R. Root. On August 1, next to the largest field meet ever held in the United States was held at Newark, N. Y., at the home of Deroy Taylor. The speakers were Pres. O. L. Hershisser, Kenneth Hawkins, E. R. Root, H. L. Case, Geo. H. Rae, S. D. House, and others. Between 500 and 600 beekeepers were present.

\* \* \*

A very successful field meeting of the Maryland State Beekeepers' Association was held at the home and apiary of Walter E. Atkinson of Glyndon, Md., July 26. The Association voted to purchase its supplies co-operatively, and the purchase of approximately \$2,000 worth of supplies was secured at the meeting.

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We regret to learn that the Western Honey Bee is losing its able editor, J. D. Bixby, who has recently handed in his resignation. We have not learned the name of his successor.

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By recent act of the Pennsylvania Legislature the old Bureau of Economic Zoology of the Department of Agriculture has been eliminated, and there has been created a Bureau of Plant Industry embracing all the duties of the old Bureau with additional ones.

# QUESTIONS.—

(1) I would be obliged if you will tell me whether any one of the following is considered a sign of either American or European foul brood: Queen of a hive being missing, queen larvæ diseased, drone larvæ diseased. (2) Is the drone whose mother was not mated considered a capable male and as good as a mated queen's drones in all respects? (3) Are the germs of foul-brood diseases carried on the bodies of the bees?

British Columbia.

Answers.—(1) In neither the European nor American foul brood have we found the queen apt to be missing. In both European and American foul brood the queen larvæ as well as drone larvæ may be affected. We believe, however, that it is rare for queen larvæ to be affected in case of American foul brood. Drone larvæ are more apt to be affected in European than in American foul brood. (2) We believe the drone whose mother was not mated is capable of fertilizing a queen; but because of the dwarf size of such drones, caused by being reared in worker cells, we would greatly prefer a drone raised in the ordinary way. (3) We have never seen anything to indicate that the germs of either kind of foul brood are spread by being carried on the bodies of the bees. There is very much on this subject which is not definitely understood at present. Contaminated honey is, however, the means of spreading both diseases, and European doubtless is often spread from cell to cell of an affected colony by the nurse bees carrying juices from diseased larvæ. This answer will probably not entirely satisfy you. It doesn't us.

Question.—(1) In keeping bees with chickens, won't the chickens eat the bees? (2) Will bees hurt pigs?

New Jersey.

W. Toppin.

Answers.—(1) A few have reported chickens eating bees but we believe you will have no such trouble. Many people keep hives right in the chicken yard. (2) If pigs are allowed in an apiary they will get stung, and then probably rub against the hives, thus enraging the bees, and possibly upsetting the hives; but, if pigs are near the bees, yet shut out of the apiary, we believe there will be no trouble even tho the pigs should receive an occasional sting.

Questions.—(1) Why don't all of those people that want to stop swarming have a brood-chamber so big that the queen cannot get it full of brood at once? (2) I would like to know if palo verde, a tree that covers the Southwestern States' hills, yields a surplus. (3) Where could I obtain some stingless bees? (4) Why haven't we a law so that a man can take up a bee claim on a piece of land to prevent crowding?

Arizona.

Burns Wood.

Answers.—(1) If the swarming problem could be solved by giving plenty of room, it would not be such a troublesome factor in



beekeeping. We have known a colony to swarm when hanging from the limb of a tree with all outdoors for room. There is doubtless a great deal yet to be

learned on the whole subject, but we feel certain that the size of a suitable hive depends greatly on the season and locality. (2) Palo verde, altho it yields some honey, could not be counted on for surplus. (3) From South America, but tho they are rather interesting as a curiosity, they would not pay financially. (4) There are many points to be considered in formulating a law to prevent encroaching on another's territory. Such a law would need to specify the proper distance between apiaries, which of course differs with the locality and even varies from year to year as the forage gradually changes. More than this, priority might give a man the apparent right to a location, yet he perhaps be a renter and a poor beekeeper at that. Later a man might buy a home in the same locality and wish to keep bees. It would be manifestly unfair to deprive him of this privilege. There are many other puzzles that will naturally occur to one in this connection, but the puzzles are surely worth solving.

Questions.—(1) Can bees use old odds and ends of wax to draw out foundation? (2) I have a plan to keep bees with very little manipulating. I would have a regular Buckeye hive, but instead of resting it on the bottom-board I would have a shallow extracting super with full sheets of foundation for it to rest on. Under this, of course, would be the bottom-board. In the spring and fall it would keep the brood farther from chilling winds. Also, I do not think they would swarm with the foundation below. What do you think of the plan?

Massachusetts.

C. L. Stone.

Answers.—(1) Bees use bits of wax from adjoining combs and when placed in the entrance they do sometimes take it, but I do not think you could get the colony to draw out foundation by simply feeding them bits of wax. (2) On page 367 of the June issue of *Gleanings*, under the heading, "Another Swarm Prevention," you will find something similar. The editors of *Gleanings* tried this out this summer, using shallow supers under the brood-chambers; some with starters, others with full sheets of foundation, and still others with combs. Of course, in our locality this season did not result in many swarms anyway, but we rather think the plan of thus using starters may be of value, and intend trying it again next year.

Questions.—(1) How could I find a colony of bees? (2) When bees are gone only 10 minutes, about how far would you look for them?

Arkansas.

W. H. Lassiter.

Answers.—(1) A good way of locating a colony in a tree is to capture a few of the bees that are at work in the field, placing them in a box containing a little diluted



honey, and then watch their flight as you liberate them. By following in the general direction they take, and from time to time catching more bees, and again liberating them, you will be able to locate the tree. (2) If bees fly a mile in five minutes, and spend two minutes at the tree, one could estimate the distance of the tree by noting how many minutes the bees are gone, subtract two minutes from the number, and divide by 10. Therefore if they are gone 10 minutes the tree is probably about  $\frac{4}{5}$  of a mile away. This is taking it for granted that the honey fed is of the same consistency as nectar.

Questions.—(1) Should an unmated queen get clipped, would she be mated and return to the hive? (2) How long will bees live without eating?

New Jersey.

Arthur Stiebritz.

Answers.—(1) If an unmated queen is clipped she will never lay anything but drone eggs, as she could not be mated. Queens are mated only when flying. (2) We have known bees to live over a week during the summer without eating if their honey-sacs were filled with honey at the beginning of that time. How much longer they could live we do not know.

Question.—If you give a frame of unsealed brood to a colony having a virgin queen, you sign her death warrant. Repeatedly I have done this and soon found the queen missing and cells started on the brood. Why is this? I have studied about it a great deal and have come to this conclusion: Bees prefer a laying queen to a virgin. This is well known. When they find eggs in the hive I think they conclude they have a laying queen somewhere in the hive and proceed to execute the virgin. If anyone can give a better theory, let us have it.

Georgia.

L. K. Smith.

Answer.—We know some consider it unwise to give eggs and young larvae to a colony having a virgin, but we have practiced this successfully for a good many years. The presence of the eggs and larvae causes the bees to gather honey and pollen to feed the young brood. This brings about a normal condition conducive to the queen's mating. Moreover, if the queen should happen to be lacking, the colony has a chance to raise another.

Questions.—(1) When should supers of honey be removed from the hive? (2) Should not some super room be given until frost to prevent too much crowding or possibly honey-bound queens? (3) Can good queens be reared in a two-frame nucleus?

Virginia.

J. T. Satterwhite.

Answers.—(1) When completely ripened, at least two-thirds sealed. (2) Whether or not super room will be necessary in the fall will depend entirely upon your locality. If you have a good fall flow you may be able to get some more surplus, but if the fall flow is light the colony will doubtless need all they store for winter. The queens, of course, should not be allowed to become honey-bound. If you find there is any danger of this, it would be well to remove a few combs of honey and give empty combs in the middle of the hive for the queen to lay in. (3) Good queens have sometimes been

reared in nuclei, but in general we advise raising them in large colonies. Of course, after queen-cells have been capped over, they may be given to nuclei to be taken care of; but the nuclei should not be so weak that there is danger of the queen-cells becoming chilled.

Question.—The following advertisement appears in the July issue of *Outdoor Enterprises*, Kansas City, Mo., page 61, column 2: "For Sale.—Australian Wine and Vinegar Bees. Big profits. They are very prolific, work day and night, and harmless. Keep in window of your house. Will start you for \$2.50 or give you six times as many for \$5.00." Is this a "fake?"

M. L. Dodson.

Kansas.

Answer.—That ad is certainly misleading. It refers not to honey bees but to a wild yeast that is called bees and is of very little value. A large number of beekeepers have called our attention to this ad. We find that extravagant claims have been made for the product, and the high price asked is apparently out of all proportion to its real worth.

Question.—July 1 I started transferring my colonies into Jumbo hives. I left three standard frames with queen and lots of brood in the Jumbo hive and placed seven Jumbo frames of foundation along with the three, supposing the bees would draw out the foundation, and in a few weeks I could raise the three standard frames to the super above and fill in with Jumbo frames and everything would be all right. The plan might have worked out had this been a normal season, but it has been a very abnormal season—old beekeepers say the worst in 20 years—as there has been no honey flow at all in any of my apiaries this season; consequently when I examined them yesterday I found some colonies with only two frames, some with three frames, and some with only one of the Jumbo frames drawn out and in no hive were there more than five or six drawn, including the standards which I put in. Now the season is practically over, with the exception of buckwheat, and as we have had only one good rain, the chances for buckwheat are not bright. In quite a number of the Jumbo frames the bees have gnawed the foundation badly. Would you replace those? If not changed I would think the foundation would be built out with drone comb. They are a pretty ragged lot of sheets just now. Would you use the standard-sized combs and get them back into the old hives, placing the Jumbo frames with brood above and try it again next season, or will the bees build out foundation in the Jumbo frames by feeding sugar syrup or using frames partly filled with honey? Can you help me?

Ontario.

E. V. Tillson.

Answer.—If late the best thing to do would be to put the bees back on the old combs. This will give the bees a good chance to prepare the brood-nest for winter and the old combs will be much warmer than the new ones. If this problem arose as early as August one could replace the torn and ragged foundation with good sheets and then feed a sugar syrup, one part sugar to one part water, feeding slowly, using a feeder with about three perforations in the cover. If this should not give them the syrup quite fast enough, you could regulate it accordingly. We have often successfully drawn out foundation in this way during a dearth.

Question.—We are desirous of securing an authentic definition of the term "pure white honey." Kentucky. H. W. Riehl.

Answer.—Pure clover honey may be considered as typical of "pure white honey," by which others may be judged. Honey only a trifle lighter or darker, so that it would take an expert to detect the slight difference in color, are also classed as white.

Questions.—(1) I think honey loses quite a part of the fine flavor after taking it from the comb. Is that right? (2) I have wintered outdoors in double-walled hives, setting eight or ten close together in the fall and banking on three sides with boughs, weeds, or hay. The bees get to flying well before I remove the banking. How shall I separate them without moving a little every day? Maine. L. H. Fletcher.

Answers.—(1) To a slight extent we believe this is true. (2) The easiest way would perhaps be to move them a little each day as suggested in your letter, provided there are only a few colonies. If there are many, you could move them to a location several miles away, leave them for a couple of weeks, and then return to your own yard and place them wherever you desire. This would, of course, be considerable work.

#### ANSWERS BY JOHN H. LOVELL.

Question.—I have noticed bees working on a small gall that grows on the twigs of the scrub oaks. Thinking this might be of interest to you I am here sending a twig with some of them attached. Is it honeydew they get from those galls? Wisconsin. P. B. Brown.

Answer.—The oaks yield no nectar either in the North or South. The oak is a typical wind-pollinated flower and offers no allurements to insects. Why then should it secrete nectar? It would be of no benefit to the plant. Anyone who will examine the flowers under the microscope will not suggest such a thing. The only criterion is the observation of the nectary and its secretion of nectar. But there are probably no plants which furnish more honeydew than the oaks. This dew is excreted largely by bark-lice (*Coccidae*) which so closely resemble galls or buds that they have deceived many people, even some entomologists. For further details see article on Honeydew in A B C of Bee Culture, last edition.

Question.—I would like a description of jackass clover, and would like to know where the seed can be obtained. California. L. M. Cox.

Answer.—Jackass clover is an erect rank-scented annual, abundant in the San Joaquin Valley, Calif. The leaves have three leaflets, resembling the leaves of clover, but the species belongs to the Caper Family (*Capparidaceae*). Flowers yellow in clusters. It yields a mild water-white honey, which granulates with a fine grain in three or four months. It is reported to be rapidly spreading and to be a most promising honey plant, which may in time rival sage and alfalfa. It is said to bloom only every other year. Bees visit it in great numbers. The name jackass clover was given to this plant by H. T. Christman of Coalings and is chiefly known among bee-

keepers. The seed is not offered for sale by any of our eastern seedsmen, and probably it would be necessary to gather it from the wild plants. No attempt seems to have ever been made to cultivate this species. Perhaps the Agricultural Experiment Station at Berkeley, Calif., could give some information on this point.

Question.—My neighbor has an apricot tree which blooms every year, and in the time of bloom the tree is usually loaded with bees, but it does not bear. One of my neighbors says that the bees are the cause. He says they take too much "juice" out of it. Is this true? Clarence H. Ziegler, Pennsylvania.

Answer.—The apricot (*Prunus armeniaca*) belongs to the same genus as the peach, plum, and cherry (*Prunus*), and has essentially the same structure. If the nectar secreted by the flowers of these trees were not removed by bees, it would be of no benefit to the trees nor to the fruit—it would merely go to waste. In removing it bees do no harm, as any one can easily observe. But in making their visits bees effect cross-pollination, without which many fruit trees remain nearly or wholly unproductive. The apricot trees remain barren because of the absence of a variety suitable to effect pollination. This is also true of many of the closely allied plums and cherries.

#### ANSWER BY DR. C. C. MILLER.

Question.—Can you tell me what is wrong with my comb-honey production? I have only a few colonies, part in eight-frame Langstroth hives and part in Danzenbaker hives. Under the same treatment each year, I am able to get a surplus only from the Danzenbaker colonies. They seem to winter better, are stronger in the spring, and go readily into the super with bait combs. The eight-frame Langstroth hives supplied with supers and bait combs and full foundation in the  $4\frac{1}{4}$  sections produce nothing. The hive-body will be filled with honey and brood, the bait sections filled, and the colony trying to swarm without drawing out the foundation in the sections. The colonies which give the surplus are hybrids, while those that do not are golden Italians. All were queened last year with queens that were supposed to have been tested Italians. I prefer the Langstroth frames if I can only get them to produce some surplus. Oregon. W. E. Smith.

Answer.—The case is puzzling. The bait section being filled and the foundation in sections beside it not drawn out, indicates either a poor flow or a weak colony. But in either case why should they try to swarm? You say the Danzenbaker colonies winter better and are stronger in spring. I cannot believe that can be accounted for by the difference in hives. As there are only a few colonies, it may have just happened the better colonies were in the Danzenbaker hives. You say the bees that give no surplus are goldens, the others hybrids. It is not impossible that you have a poor strain of goldens. At any rate, if I were you I would not give up the Langstroth frames without further trial. At a time when a Danzenbaker colony is storing, if a Langstroth colony with as many and as good bees is not storing, then your bees are utterly different from mine.



ARE colonies weighing two pounds on April 15 profitable? According to G. C. Greiner in the August American Bee Journal, Mr. Demuth

thinks they are not, while Mr. Hershiser claims in his locality very few colonies would weigh heavier at that time. Mr. Greiner believes the difference of opinion due to locality and says his whole crop comes from such colonies that either weigh two pounds or less, or are made so by division. If undivided he finds at the opening of the honey flow a large percentage of his bees are old worn-out fielders exerting their last vitality in preparing to swarm. If the colonies are divided, his bees the fewer in number are nearly all young energetic workers doing their best at storing.

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In answer to the question, "What is the quickest and best way to rid bees of foul brood?" the editor of the California Honey Bowl (July) replies, "Amend our present laws so as to allow bee inspectors \$5 a day and expenses. Compel them to remain on the job until diseased apiaries are cleaned up, force all beekeepers to keep bees on movable combs, retire all inspectors over 60 giving them a 'good service' button, and put in young, well-posted, energetic bee inspectors, and the job is more than half accomplished."

\* \* \*

The advantages of the large hive may be secured without heavy lifting, according to Mrs. C. E. Fowler in the August issue of the Domestic Beekeeper. She advocates a sectional hive of 10-frame bodies 5 11/16 inches deep, using frames with 7/8 x 1/2 inch top bars, 3/4 x 1/4 inch bottom bars and 5/8 inch bottom starters. She says with this arrangement one has practically continuous frames extending from the bottom to the top of the hive so that the queen readily passes from one story to another.

Whatever one may think of sectional hives of shallow supers, it is true that the value of frames with narrow top bars and all-worker comb securely attached to top and bottom bars so that bees pass more readily from one story to another, has never been strongly enough emphasized.

\* \* \*

The disposal of the honey crop is the subject of an address by C. P. Dadant, which appears in the July issue of the Beekeeper's Item. In urging greater co-operation and organization, Mr. Dadant says the benefit of an association does not lie in securing for its members greater benefit than is possible for those outside. A policy of exclusiveness, he believes, will always react on the association, for it will result in beekeep-

## THE BEST FROM OTHERS

Iona Fowls

ers outside of the association disposing of their crop at such prices and in such condition as to injure all sales. Not only does he consider it an advantage

for an individual beekeeper himself to join, but it is to his interest to have as many others as possible also join. He continues: "I have often heard it said that there are already too many beekeepers and that we should dissuade people from engaging in that occupation. But the truth is that millions of human beings who know, from hearing it repeated, that honey is the best, purest and healthiest of sweets, do not get a taste of honey from one year's end to the other, because the unwieldy distribution of the product makes the retail price very often twice the amount that the producer has obtained. When we get the distribution arranged so that the cost to the consumer will be only a trifle above the net price obtained by the producer, there will be unlimited sale for our product."

With organization he believes everything may be conducted in the most economical way, and the honey arrive at its destination in the best possible shape and with the least waste and expense. Tho each state and district must manage its own affairs, he thinks it would be well to be united still further, perhaps as an affiliation such as the National Association of Beekeepers is now planning, so that matters of interest to all beekeepers and all beekeepers' associations may have a channel thru which the necessary information may be spread to those interested in it.

In conclusion he says: "Let it not be thought these matters might be objectionable to the large dealers and handlers of beekeepers' produce. The sooner beekeeping is carried on in a businesslike way, the more successful will be all those who have anything to do with it."

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The beekeepers seem to be working as a unit towards prices almost as good as last year's, and this they should have in order to compensate them for the high prices of all supplies, tin containers, etc.—M. G. Dadant, American Bee Journal.

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While this season has been very disappointing to many beekeepers, 1919 is not to be the last year of beekeeping in California. Do not think of what you might have sold your bees for last spring, but of what a fine crop you will produce when all things are favorable.—L. L. Andrews, August Western Honey Bee.

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Prophesying low prices is the most effective way of lowering prices.—Eugene S. Miller, August Domestic Beekeeper.

I ARRIVED home last Sunday eve, after a trip of nearly five weeks. I surely had one good time all the way around. I called on Dr. Miller, and found him and his dear women-folks just the same as I always found them there during the past 30 or 35 years. While Dr. Miller is in his 89th year, he seems to be as well and chipper as he was nearly 20 years ago when we went to the Los Angeles convention of the National. You will remember that was the time when "A. I." and four others of our party walked down and up the Grand Canyon of the Colorado, and nearly collapsed in the effort. But Dr. Miller was wise as usual, and staid at the hotel "with the rest of the women!" It did me lots of good to see "A. I." and Dr. Miller on my trip. Those two "old boys" surely have done their share to put beekeeping on an enduring basis. They have not only been blessed, but have been a great blessing to others.—George W. York, Bonner County, Ida.

One would gather from the writers that the skunk should be exterminated. Now as a beekeeper I have had little trouble with skunks. They do not visit the apiaries only in exceptional cases and where one is found working at the hives, it is an easy matter to trap him. Now the skunk is one of the greatest friends the farmer has in that he is a great vermin-destroyer. His natural diet is mice, ants, and all sorts of insects. Also he is a great destroyer of white grubs. One skunk will kill more mice in a season than half a dozen cats. The skunk is protected by law not merely to conserve him for his hide but for the value of his services as an all-around vermin-destroyer. — P. A. Seager, Allegany County, N. Y.

I notice an article in your paper in regard to skunks troubling hives. A fence of poultry netting around the bee-yard should prevent all that. In the last 40 years skunks have done but little damage on this farm. One took six or eight young chickens, and others a few eggs. I think that five dollars would cover the entire amount of loss. In return they have destroyed untold numbers of white grubs. I have seen several acres of pasture land where one skunk family had taken a grub out of about every square foot. Skunks have been almost all trapped off in this locality in late years, and in consequence the grubs destroyed almost all the pasture in the country. The sod could be lifted up like a blanket. The little white clover was almost all killed out. It is safe to say that millions of dollars of damage was done to pasture alone—to say nothing of crops destroyed in this one county, a great part of which would have been saved

## BEES, MEN AND THINGS

(You may find it here)

if skunks had been let alone. But then if a robin eats a cherry, kill it regardless of the good it may do; and if a skunk eats a few bees because the own-

er was too shiftless to put a fence around them, kill it also and be sure to give neither of them a fair trial—let it be lynch law.—Wm. C. Kelsey, Cook County, Ill.

Permit me to offer a few thoughts on the question of H. H. Winger, page 387, June Gleanings. He should not give queen-cell till the colony realizes its queenless condition, otherwise, the bees will destroy the cell. Wait till they begin cells of their own, then give them a ripe cell. Emerging first the queen from the cell given will destroy the others. You can depend on this except occasionally, in swarming time when the first queen emerging may lead out a swarm, leaving those started by the colony to hatch later. To avoid this trouble you might destroy all the cells started by the colony.—L. K. Smith, Carroll County, Ga.

In the description of the Jay Smith cages, page 499 of August Gleanings, Mr. Smith in speaking of releasing the queen makes no mention of queen-cells or the time of releasing the queen. The queen should be released in about four days, and at that time the queen-cells should be torn down. For oftentimes the queen does not tear down these cells, and in that case the colony will swarm or the queen be superseded.—J. E. Thompson, Medina County, Ohio.

A few nights ago when out listening to the bees ripening honey, I found a big frog at the entrance of a hive. I had noticed for some time that bees were disappearing, so altho I had never heard of frogs eating bees, I killed this frog on circumstantial evidence and next morning I performed an "autopsy" and found him well filled with bees.—J. S. Ford, Santa Cruz County, Calif.

You should be SHOT for publishing "Does Beekeeping Pay?" in your last paper. The average location and the average market are badly overstocked. Why rush a lot more in? The worst trouble of beekeepers is not from disease, but from competition both as to location and markets. In this district the bees are so well hidden that altho we are overstocked and no locations left yet a stranger traveling around could find practically no bees. Naturally we bee-man will sidetrack any one who comes in, if possible.—V. V. Dexter, Kittitas County, Wash.

I am sorry (or glad) to say, I and my fellows have no idea about "foul brood." There are not the both (American and European) foul brood in Japan. And, there is no I. O. W. disease.—Yasuo Hiratsuka, Japan.



IN Our Homes for August I mentioned some of the indications that the spirit of the Lord Jesus Christ has been coming here on earth ever since I have been able to look at and over humanity. Just recently another thing has suggested itself to me—the work of Christ's spirit or the Christian spirit. Fifty years ago pro-

fane swearing was so common that one could scarcely pass along the streets without hearing it. We heard it on the cars, we heard it in places of business; and some of the boys and men who operated our railways seemed on a sort of rivalry to show the traveling public who was most proficient in taking God's name in vain. Is it not true, dear friends, that a great change is taking place? In one of my visits to the late Prof. A. J. Cook, who was then connected with the Agricultural College of Michigan at Lansing, he, together with his wife and myself, made a little trip out in the country. Some fellow who sat near indulged in such a strain of oaths and curses that Mrs. Cook put her hands up to her ears; and there was such an expression of pain on her face as I shall never forget. Is it not true that a great change has come over the world, especially over the traveling public? I really believe it is years and years since I have heard such a string of oaths and curses as I used to hear in the years gone by. The advent of prohibition has helped the matter greatly.

I remember away back shortly after I was converted there was a notorious character in our town who used to go out on the street and fairly yell his oaths and curses until quite a crowd would collect around him. At one time while I was at quite a distance I heard him holding forth. I meditated that, if I rebuked him in his partly intoxicated condition, he might turn on me, but I decided to take the chances. I walked up with hasty strides; but his back was toward me so he did not see me coming. The crowd did, and began to snicker and look in my direction. "Dave" finally turned around and saw who was

## OUR HOMES

### A. I. ROOT

Thou shalt not take the name of the Lord thy God in vain.—EXODUS 20:7.

Let your communication be Yea, yea, and Nay, nay; for whatsoever is more than these cometh of evil.—MATT. 5:37.

Let the words of my mouth, and the meditation of my heart, be acceptable in thy sight, O Lord, my strength and my redeemer.—PSALM 19:14.

Wash me, and I shall be whiter than snow.—PSALM 51:7.

coming. As soon as he got a glimpse of me he stopped abruptly. Then the crowd began to laugh. Somebody ventured to say, "Why, Dave, what is the matter? What made you stop all at once as soon as you saw Mr. Root coming?"

He hesitated a little while, and then with a comical smile on his face said,

"Why, boys, Mr. Root and I belong to the same church."

The idea that poor Dave was a member of *any* church, or ever had been, was so utterly ridiculous that the whole crowd broke into a big laugh with cheering. After Dave had sobered down I paid him a visit, and we had a long talk. He promised me to stop drinking, and *did stop for a whole year*; but, oh dear me! with the open saloons we had at that time, and the many temptations surrounding him, Satan got him, I fear, after all.

Out in Petaluma, Cal., there is a weekly poultry journal published. So far as I know it is the only weekly periodical of the kind in the United States. But it has been running quite a number of years and still keeps up. Of course, they urge everybody to keep chickens. Here is a brief clipping from their latest issue:

Raising chickens is a pleasant business, and the chickens themselves are a delight. They are good companions, optimists every one, always singing and never swearing.

By the way, the last sentence reminds me of the old saying that "curses come home to roost, but roosters never come home to curse." I confess I never thought of it before; but is it not true that chickens, especially laying hens, are always happy when they have decent care and surroundings? and sometimes their singing is just as happy and joyous, especially the cackling after the egg is laid, even if their environments are poor and shabby. Shall we not take a lesson from our feathered friends? The idea of chickens swearing suggests a little item I saw years ago in some periodical. I believe it is well known that when parrots are learning to talk they are especially prone to get hold of "swear

words." This injures their value. No one wants a parrot that swears. It is true that saloon-keepers, or at least some of them, *might* consider a swearing parrot a good advertisement for their business; but, may the Lord be praised, saloon-keepers and saloons are now a thing of the past, or very soon will be. Well, this little story was, I suppose, made up. It told of a man who had a swearing parrot, and he was determined, if it were a possible thing, to break it of the habit. Accordingly, every time he heard the bird swear he not only gave it a good scolding but soured it in a barrel of rainwater. After one such baptism it was walking about and trying to shake the water off its feathers in order to dry out a little better, and went around the house to get into the sunshine. It happened that morning that somebody had neglected to replenish the dish where the chickens usually got their water. Some of them discovered they could get a drink by flying up on the barrel containing the rainwater. As a matter of course, three or four were pushed in and were nearly dead before the good wife found them; but as they showed some signs of life she put them down in the sunshine, thinking that that would revive them. Well, Mr. Parrot, when he went around the house, got a glimpse of the drowned chickens. He tipped his head on one side to survey the conditions for a minute and then broke out, "Huh! little ——— fools. Been swearing, I suppose."

Maybe you wonder why I have given space to such a foolish yarn as that. It is because it illustrates so well how hard it is to break the habit. Why should any one take the name of the great God and Father above in vain? and especially why should any poor, infirm child of humanity undertake to link together heaven and hell, particularly as there is between the two places a great gulf so that the Savior said it is impossible for any to pass from one side to the other. It is not only the parrots; but the children, if they hear such words uttered, are almost sure to learn to use them. Years ago, when I was on the school board of this village, swearing in the juvenile building became so prevalent that the school board was asked to do something. I went and talked to the children, and got them to feel well enough acquainted so as to tell me *where* they got hold of such awfully bad words. They said they heard the men on the streets on their way to and from school use such talk; and I finally went out on the street myself to see how far it was true. Then I put an article in our county papers; and when I heard a man swearing I kindly reminded him that

the children in the streets would hear his words and pick them up. Then the question came, "Why do children—yes, and grown-up people—catch on to such words and use them, more than anything else?" My good friends, the explanation is that the "prince of the powers of darkness" makes it his business to encourage that kind of disloyalty—yes, I think we may call it anarchy—against the great God above and against his holy laws. Words that I heard uttered in my childhood come back to me even yet. It seems as if Satan himself stands near by when I happen to be severely provoked or vexed, and pushes a bad word out before me and suggests, "Here! that will fit the situation exactly." Why, as good a woman as Mrs. Root is—and oh, how many times I have thanked God for giving me such a partner in life!—as good a woman, I say, as Mrs. Root is has confessed to me that sometimes when she is sorely tried, and perhaps very tired, "harsh words" come into her mind in spite of anything she can do. Of course she says, "Get thee behind me, Satan," and banishes all such thoughts and feelings as speedily as possible. My remedy at such times has been for years past, as you may know, my little "emergency" prayer, "Lord, help."

Somebody has said—perhaps it was the *Sunday School Times*—that the person who swears is never truthful. Look about you and see if it's not so.

And now, dear friends, with the above preface I hope you will be able to see and take in the glorious beauties of that wonderful text I have quoted so much of late—"Let the words of my mouth, and the meditation of my heart," etc. You certainly know the rest of it by this time. First and foremost, be very careful of what you say. Do not, under any circumstances, let a word get past your lips that you may afterward regret having spoken. And then, after that has been done, go a little further and do the same with the "meditation of your heart." Shut out every unkind and uncharitable feeling. Do not let it gain a lodging place. "Do good and lend, hoping for nothing again." Return good for evil. Let the Holy Spirit, even the spirit of Christ Jesus our Lord and Savior, have a permanent abiding place in that heart of yours. I am bad and wicked even yet at times, but I am making progress; and I am becoming happier and happier every day because of the progress I am making. I have just had a refreshing sleep down in the cool basement of our little cottage; and as I woke up refreshed and ready for work in the garden adjoining, or



refreshed for writing our Home Papers, I felt like shouting praises to God. Several snatches from our beautiful hymns came into my mind. In thinking about how I was succeeding in banishing evil thoughts I remembered that hymn and our closing text:

Wash me, and I shall be whiter than snow.

What a suggestion! Not only as pure and clean, *in thought*, as the beautiful snow is in color, but even *whiter* than snow, as the psalmist expresses it.

And then there is another old hymn which says:

Redeeming love has been my theme,  
And shall be till I die.

And when I consider again that slavery has been put down, that lotteries are debarred by law, that wars are to be no more, that the troubles between capital and labor are to be settled in a Christianlike way, and finally, as I believe, that profane swearing, like strong drink, is going to be considered so low and disgraceful that the great, wide world will have forgotten that men and boys were ever guilty of anything so low in the eyes of a righteous God, I again take heart. Then shall not only our nation but the whole wide world unite in that grand and glorious hymn,

Hail to the brightness of Zion's glad morning!  
Joy to the lands that in darkness have laid!  
Hushed be the accents of sorrow and mourning!  
Zion in triumph begins her mild reign.

STOP! LOOK! LISTEN!

So many accidents are happening of late—and not only accidents but deaths—by the cars running into automobiles full of people that I have felt like lifting up my feeble voice in warning people to be more careful—especially those just learning to run an automobile. Almost every paper you pick up contains more or less reports of accidents and even deaths because people do not (and it almost seems will not) “stop, look, and listen.” In front of our group of factory buildings there are six pairs of railroad tracks. The main traffic road has three tracks, and there are three side tracks that lead down to our warehouse and connect with another road, crossing the main road at right angles. A flagman is stationed on the main track with his big emblem reading “Stop.” Well, it has been my fashion for years past, especially when in a hurry, to stop on the thirty-foot space between the two groups of tracks. The tracks of the first group are seldom used, when compared with those on the main track. Well, just after dictating the Home paper above I was asked to take a hurry order up town before the whistle blew. The

watchman stood on the main track and held up his card with the “Stop” on it; but, as I was in a hurry, I thought I would get over on the space between the tracks, taking it for granted that there was no train coming except on the main track. I got just halfway over the first group when I saw a freight car backing down on me. Before I saw it at all, it was so close to my electric that it was a question whether I should back down or go ahead. In the fraction of a second I made my decision and crowded on the highest speed of the car. It took a big jump forward; but notwithstanding the jump the flagman says the freight car actually rubbed on the rear guard of my auto. Very likely my deafness prevented my hearing the freight cars that were backing down. I am not only just now thanking God that I am still alive, saved by what might almost be called a “hairbreadth escape,” but I am also reminded that people like myself, even if they are close on to 80 years of age, are not too old to be taught; and, finally, dear friends, shall we not only “stop, look, and listen” when we are crossing railroad tracks, but shall we not all together resolve to *stop, look, and listen* more intently when Satan tempts us to use bad words or to harbor unworthy thoughts?

THE HIGH COST OF LIVING, THE HIGH COST  
OF DYING, AND HIGH COST OF  
“GETTING SICK.”

I think I might with great propriety add to the above the high cost of growing old. I shall be 80 years old in a few days if I live that long; and I have great cause to be thankful that I have lived *so long* and kept *so well*. But I think our best authorities recommend that old people, as well as almost everybody else, had better have a good doctor look him over once a year and maybe offener. In view of this I listened to the children a few days ago and consulted one of the best physicians in Cleveland. He said, as the others have said, that it is a pretty hard matter to “make an old man young again.” As he had quite a number of other patients waiting he looked me over for perhaps 15 or 20 minutes. The charge was \$5.00. Now, I do not object to that, mind you, especially if you get advice from our very best up-to-date physicians. The children recommended him because, they said, he gave little or no medicine. After he had got thru he gave me a prescription. I presume a good many people carry these doctors' prescriptions to the drugstore without even looking at them. I have learned by experience the wisdom of

looking at everything—in fact, scrutinizing everything carefully that I have to pay money for. A ticket agent not long ago gave me a ticket for the wrong town; and had I not noticed it before the train left I might have been in a peck of trouble. Well, this prescription read “Sodium nitrate,” so many grains or scruples. I do not know what doctors’ characters mean. The rest of it was “Aqua pura.” This I should call Latin for pure water or distilled water. Well, nitrate of soda is a fertilizer, and is sold by the ton. I do not know just how much a pound of it would cost; but even if chemically pure it ought not to be very much for, say, a teaspoonful. I supposed the price would probably be a dime or perhaps 15 or 20 cents. The drug clerk carried it to his employer, and they talked over something about it; but the price was 75 cents. Now, we have a lot of doctors and a lot of druggists who take and read our journal, and I have no desire to pitch into them. In fact, it pains me to interfere with anybody’s business; but when the good of the rest of humanity demands it I hope I may not be found shrinking from my task. Let us go back a little.

In this journal for September, 1914, I told my experience with enserol. If you have the back numbers I shouldn’t wonder if it would pay you to hunt it up and read it again. Somebody sent me a little pamphlet telling how a woman was cured of deafness and a bad trouble in her ears. This woman professed to be a Christian. She said she had prayed over the matter, and that God in his love and wisdom directed her to a remedy. You are to go to the drugstore and have a prescription put up calling for glycerine, enserol, and boiled water. I knew what the glycerine ought to cost, but I did not know anything about enserol. I threw a half-dollar down on the counter for it; but the clerk explained that enserol was a very expensive medicine. I used the prescription according to the directions every morning, noon, and night. It took quite a little time, and finally it got to be rather monotonous, especially as I could not discover that it did a particle of good; and I had faith, too, from reading that little book.

Just about this time our Agricultural Commission at Columbus sent out a pamphlet warning people against the medicine swindles. This same “fluid” enserol stood at the top of the list; and they explained that it was nothing but cinnamon water and borie acid. My prescription cost me \$1.40, and the whole thing could be sold for *five cents a gallon*. (How is that for “H. C. L.”?) I went to the druggist and

remonstrated. Said he, “Mr. Root, I got the same pamphlet from Columbus that you mention. But we are helpless in this matter. An agent left the enserol medicine with us, and said there was to be no pay unless we sold it. If customers called for it we were to sell it for so much.”

This druggist thought that no responsibility rested on his shoulders if customers came in and asked for enserol. I think that, before taking their hard-earned money, he should have showed them the warning, in that pamphlet sent out by the State of Ohio.

Why do I bring the matter up now? Because our daily papers are full of like advertisements. I have not investigated *all* of them, for I have not time; but I have bought almost everything offered for relieving sore feet, curing corns, bunions, etc. This particular medicine that makes your corn “drop right out,” roots and all, in just a few days, is not only advertised in all our dailies, but in our magazines, often occupying a whole page. To be sure that the “men folks” will all notice it, they picture a woman holding her dress up a great deal higher than she needs to do, to explain the way in which she applies the medicine to her corn. Well, Mrs. Root and I have tried nearly everything advertised in that line. The directions are to soak the feet 15 minutes in water as hot as you can bear it; then rub off as much of the corn as you can before you apply the remedy. (And this will do a lot of good without any “medicine.”) Yes, these things do *some* good; but a good sharp knife handled carefully will do just as much good, and I have decided more, and it is less trouble and less expense. The circular piece of cotton with mucilage to hold it in place so that the shoe may not press on the sore spot is sensible, and I believe the price is reasonable. But it is some bother to keep fussing with them. The soaking of the feet in water as hot as you can bear it will often do the business without any medicine. This same remedy was first advertised at 35 cents; but just as soon as a big demand was created the price went up to 50 cents, with some more “cents” added for war tax.

Several times I have warned our readers against having anything to do with any article or any institution that waits, we will say, for you to bite at their bait; and if you do not soon “bite” they will follow it up with some ingenious story as to why you can have it at half price if you order right off “instantly.” Some of them later on come down to a still lower price. The



latest thing in that line was a remedy for bunions. They sent me a sample patch to try. I put it right on, and it did help for a few days. Then my bunion or callous place was just as bad as ever. The price was \$1.00 for five patches. I thought that was rather expensive. Then I tried the corn remedy. I think that was sold for 25 cents for five patches. It was perhaps about as good as or perhaps a little better than some of the other medicines I have used, and I do not know but I should have sent for more if the price had been more reasonable. But just this morning I got a notice that, for particular reasons, they would sell any of their stuff at half price if you would send right off, and then they added:

Remember, that while you have the opportunity to get quick, permanent relief, you must avail yourself of this special offer *now*, as it will never be made again.

Just now in a little magazine called *Farm and Home Mechanics* I found the following:

#### THE DRUGGIST'S TURN.

The druggist danced and chortled till the bottles danced on the shelves.

"What's up?" asked the soda clerk. "Have you been taking something?"

"No. But do you remember when our water-pipes were frozen last winter?"

"Yes, but what—"

"Well, the plumber who fixed them has just come in to have a *prescription filled*."

The above is, of course, a joke; but such jokes sometimes do a lot of good. The moral that is pointed out is this: That it seems to be a part of the drug business, at least that of some druggists, to put any fancy price they please on a doctor's prescription—at least when it comes from a big city doctor. Now, here comes in another thought: One of my brother's sons is a doctor and a good one, and a professing Christian. I once talked with him about fixing a doctor's fee according to the financial standing of the patient. He replied something like this:

"Uncle Amos, when a doctor is called he can not go to Dun and Bradstreet to see whether the patient pays his debts or not. He is in duty bound to respond to every call to relieve suffering and save life, no matter what it costs. Now, there are many people who do not pay and never expect to pay. Is there any other way for the doctor to get a proper salary than to let those who are abundantly able, help take care of those who have nothing to pay with?"

Do druggists have to *give away* expensive medicine, in like manner? Not much!

I do not know whether the commission now starting all over the world expects to

invade *drugstores* or not; but I hope and pray they will tackle the swindling in patent medicines, or, say, new remedies boomed thru our daily papers like "enserol" and a hundred other things. I hope this sort of profiteering will be fully investigated and held up to the light of day. Professor Cook once told me that his old father lost his life by wasting time on a patent medicine, when beset with a trouble in his old age, that could have been readily cured by a surgical operation. Friend Cook added that, had his father only consulted *him* in regard to a trouble that is quite common to old men, he could, with the aid of a competent surgeon, have restored him almost at once; but he trusted to the patent medicine until it was too late. "With malice toward none, and charity for all," I hope and pray that the great public who read advertisements in the newspapers may soon be protected from these *fraudulent advertisers*.

#### MOORE HAVEN AND THE REGION ROUND ABOUT LAKE OKECHOBEE.

So much has been said and is *being* said about Moore Haven, and its wonderful soil, etc., that I have asked my friend Wheeler to give us the real facts in regard to the matter, its advantages and disadvantages, which he does in the following:

It would be hard to compare Moore Haven with any other place, for it is utterly unlike any other place in which I have ever been. While some features are very much ahead of other places, some others are very disagreeable. The beautiful palms, flowers, orange orchards, and all that which appeals to the eye, are utterly lacking here at present, except in a few cases where homes have been built long enough to get some of these things established. However, all these will come as the years go by, and many of them will grow more luxuriantly here than in the sandy regions.

As to the soil—of course, that is our long suit here, and for most crops it is *far ahead* of any other Florida soil, I have seen. At present prices, the soil is actually worth \$20.00 per ton for fertilizer, gauging the price by other fertilizer prices. It has been found that the so-called saw-grass land will not produce yet, for some cause not as yet ascertained. Various reasons have been advanced for this. Some think it is on account of the excessive ammonia, there being three per cent ammonia in the soil. The soil expert here is working on that theory and is turning the soil up to the depth of 18 inches and working it thoroly to get it aerated and to cause some of this excessive ammonia to evaporate. Incidentally, his operations are getting that raw peat rotted and in a condition where the various elements are accessible to the crops, which, in my opinion, is worth far more than the escape of the ammonia. The elder and custard-apple lands have the same analyses of ammonia and are producing bumper crops. Some believe (and I think the analysis of the soil bears them out in it) that the application of a small amount of phosphate would be a benefit. As it is, however, they are now growing the finest crops of corn, beans, pota-

toes, tomatoes, etc., I have ever seen in Florida. Celery and other crops which are affected by root knot, etc., do not do well here. Peach trees set out a little over a year ago will bear a big crop this year according to present indications.

Since the railroad is established here, together with the boat service, there will, no doubt, be adequate transportation facilities for all future business. People are gradually settling up the country farther down the lake, and the A. C. L. R. R. Co. promises to push their line as fast as possible down that way to take care of their products. Very few have settled as yet as far down as the Miami Canal, but the few who are there have proved conclusively that this is the most favored section around the lake, as it is just as productive as the other land, and practically "frost proof." Here around Moore Haven we have light frosts along the lake front, and some pretty heavy freezes two or three miles back.

Bees did exceedingly well here last season, and I see no reason why they should not in the years to come, as thousands of acres of peanuts are grown here every year and furnish a practically steady flow of honey from Apr. 1 until late fall. The honey is equal to our northern clover honey both as to looks and flavor.

There is plenty of work here most of the time, common labor bringing from 25 to 30 cents per hour, and skilled labor from 50 to 65 cents per hour. Land prices run mostly from \$100.00 per acre up to \$400.00 or \$500.00 per acre, according to location. Good land can be bought at \$160.00 to \$250.00 per acre within one or two miles of Moore Haven. Settlers down near the entrance of the Miami Canal have only boat service at present, and that not very satisfactory, but will, no doubt, have a railroad within a very few years. They have a very pretty lake front there and almost tropical climate. Land prices there run about the same as here at Moore Haven. Houses to rent are at a premium here and very poor houses bring very high rent. Practically every house and room in the town is taken for the next few months or until after the tomato harvest is over. There are more than 2,000 acres of tomatoes to be picked here, and only room available for about 400 people outside of the regular population, and they expect to have to import at least 1,000 to 1,500 pickers and packers. A problem the Chamber of Commerce is working on now is the housing problem. Rent runs from 8 to 10 dollars a month for very small ill-built shacks up to \$35.00 a month for just ordinary houses, not furnished.

Mosquitoes are a very great nuisance here and have been very bad the last year. There are plenty of them here now, so that it is nearly impossible to sleep except in well-screened houses. Last winter there were practically none, but the warm winter with lots of rain this year has made them very bad.

This muck land is the dirtiest place to live in I ever saw and the ammonia in it causes it to burn wherever it gets on the flesh, making it very disagreeable until one has been here a year or so and becomes used to it. Sores commonly called muck sores are quite prevalent and are extremely painful and hard to cure. I had one on my foot that my best efforts failed to cure for five months, and I only cured it when I left Moore Haven for a period and got off the muck, when it "cured" of its own accord in three days. I took ocean baths, which, I think, helped in its cure. Bugs and insects of all kinds are very obnoxious and snakes are pretty numerous.

Fishing and hunting are superb, and the man who delights in these sports will find this a veritable sportsmen's paradise.

The most serious trouble with Moore Haven so far has been the faculty its people seem to have of filling all their eggs in one basket. A year ago it

was all potatoes and cabbage when, as the markets turned out, it ought to have been tomatoes. This year it is all tomatoes, and hardly any potatoes in the country and prospects are potatoes will be high. Last year they hardly brought enough to pay the freight. This last summer everybody grew Spanish peanuts, and could hardly give them away. Chickens do finely here, also hogs and cows; and when Moore Haven people learn to do diversified farming and keep a few hens and a cow and some good breed of real hogs, they will be the most prosperous people on earth.

LEON C. WHEELER.

Moore Haven, Fla., March 20, 1919.

Since the above was in type "big things" are reported from Moore Haven. I clip below from *Florida Grower*:

Moore Haven muck is being shipped to Sebring by the carload; and, as it is equal to good fertilizer, it will be of great benefit to those who use it.

## Special Notices by A. I. Root

### THE NEW ANNUAL SWEET CLOVER.

*Dear Mr. Root:*—The seed of the annual sweet clover you sent me were sowed on the 25th of March, and by the 20th of July were about 30 inches high and in full bloom. At this date I have some matured seed on them which I will save and will have quite a plot of them next year. I have only about eight plants.

S. B. MYERS.

Memphis, Tenn., Aug. 11, 1919.

### MANGROVE HONEY FROM FLORIDA ONCE MORE.

*Dear Mr. Root:*—We are always glad to see GLEANINGS when it comes, and were especially interested in the pictures in the last number. Yours with auto load of potatoes reminded me of an experience Ruth and I had a few days ago when we were out after a load of honey to one of our Cortez yards, and got stalled in the sand with 700 pounds of honey on our trailer. By the way, that honey is on its way to our place at present, and I wish that you could sample some of the mangrove barrel, not the barrel, but the honey. We think that it is about as fine as clover honey, altho we have always heard that mangrove honey is not good. I have instructed your people to pay you for 60 pounds of honey which I took from your hive of bees. I sent in all a little over 5,000 pounds.

My family wish to be remembered to Mrs. Root. Trust we shall soon have you both back with us again, as we miss you much in church and S. S. Sincerely yours,

J. B. NOTESTEIN.

Bradenton, Fla., Aug. 6, 1917.

Our oldest readers will remember that it was the mangrove that gave the tremendous yield of honey before the great frost of 1895. The trees were so much injured that they are only now beginning to "catch up" after all these years. My recollection is that the mangrove honey had a beautiful flavor all its own, in times past. I might add that my one colony of bees that *once more* gave the 60 pounds sent out a big swarm (which "absconded") just before we left about the first of May.

### SUNFLOWER SEED. THE LOCALITY THAT GROWS 1275 TONS. SEE P. 538. AUG. NUMBER.

The following from Burbank will, I am sure, be read with great interest.

*My Esteemed Friend Root:*—Long have I known you and of you thru your writings and magazines, etc. In fact, I think you are the one who encouraged me to start beekeeping in New England long ago.

The name of the town where so much sunflower seed is raised is Manteca, San Joaquin Co., southern California. Probably the postmaster of that place could inform you all about it. I have just had a request from a large Eastern firm for two or three carloads of sunflower seed which I cannot fill; and by the way, I have now a compact-growing variety of my snow-white seeded sunflower, absolutely true from seed, which grows only three feet in height, having enormous blossoms and as much feeding value in foliage as the older tall kinds because the plant makes a thick growth of leaves and stalk from the ground up.

LUTHER BURBANK.

Santa Rosa, Calif., July 22, 1919.



### Talks to Beginners.—Continued from Page 600.

over the tops of the frames, and the pail and the top of the brood-chamber warmly covered with a piece of canvas or burlap to retain the heat so that the syrup will be taken readily by the bees. The inside and outside covers should, of course, be placed over the super.

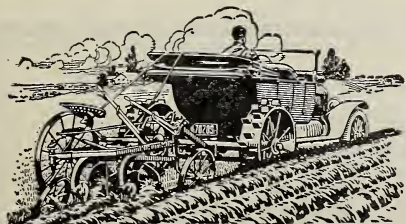
Some use an escape-board from which the escape has been removed, placing the board between the brood-chamber and empty super, and inverting the pail of syrup over the hole in the board. Strong colonies will sometimes take the contents of one of these ten-pound pails in a day. If a colony is unusually slow in taking the syrup, the process may be hurried somewhat by re-warming the syrup.

### Other Kinds of Packing.

The preceding applies to beekeepers in the North who have double-walled hives and intend wintering outdoors. There may be some, however, who may prefer to winter in a different way, and these should be making their plans accordingly. In localities where the average winter temperature is below 15 degrees F., beekeepers who have good stores and dry, well-ventilated cellars that may be darkened and left at an even temperature somewhere near 47 degrees, may winter inside to advantage. In that case no more than 20 pounds of winter stores may be needed.

Those in the North who have single-walled hives and intend wintering outdoors will need to construct a suitable packing case. These cases should be rainproof, should surround the hive, and allow four to six or more inches of packing between the case and the hive. There should be packing at the top and sides, and some prefer it also at the bottom.

Even in the Southern States some packing is a decided advantage, leaving the colonies in a much stronger condition in the spring. The protection may be in the form of light packing cases, but even wrappings of paper will be quite worth while.



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Grind your wheat into Best Whole Wheat or Graham Flour. Your doctor knows how healthy these are. Make the BEST Corn Meal, the old-fashioned sort you can't buy at any price nowadays.

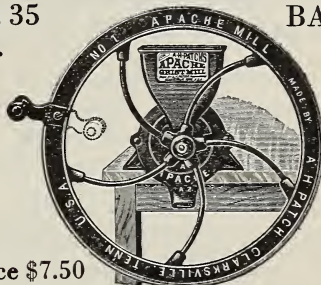
Do all sorts of fine and coarse grinding with an

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Wt. 35  
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## This Mill

Makes Best Corn Meal, Graham Flour, Rye Flour, Chops, Hominy, Cracks Peas, Grinds Coffee, Spices, etc. Perfect adjustment for coarse or fine work. Will send Mill prepaid by Express \$7.50

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O. E. Tulip, Arlington, Rhode Island  
56 Lawrence Street

## Leininger's Strain of Italians

have stood the test for 35 years. We will offer queens for sale from this famous strain, beginning June, as follows:  
One untested queen, \$1.50; 6, \$8.00. One tested queen, \$2.00; 6, \$11.00. Select breeders, \$15.00 each.

Fred Leininger & Son, Delphos, O.

## MOORE'S STRAIN OF ITALIANS

Noted for Honey Gathering,  
Hardiness, and Gentleness

Untested queens - - - \$1.50; 6, \$8.00; 12, \$15.00  
Select Untested - - - 2.00; 6, 10.00; 12, 19.00

Safe arrival and satisfaction guaranteed.

I intended to run my apiaries for honey this year; but so many of my customers say that they must have "Moore" queens, I am devoting part of my home apiary to queen-rearing.

J. P. MOORE, MORGAN, KY.

## Mott's Northern-bred Italian Queens

are hardy, prolific, gentle, and hustlers, therefore resist well disease.

Untested, \$1.00 each; \$10.00 for 12.  
Select Tested, \$2.00 each.  
Virgins, 50c each.

Plans "How to Introduce Queens," and  
"Increase," 25c.

E. E. Mott, Glenwood, Mich.

# Ontario Bred Italian Queens

NOW IS THE TIME  
TO REPLACE THOSE OLD BLACK QUEENS  
with young ones of a gentle strain. Great honey  
gatherers and resistant to European Foul Brood.

Select Untested - \$1.25 each; \$13.00 dozen  
Untested - - - \$1.00 each; \$10.00 dozen

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